OCTOBER 15, 1951 NEWS ISSUE

Electrical World

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J. W. Cryder, New President of Rocky Mountain Electrical League

On Top of Old Smoky.....Page 16

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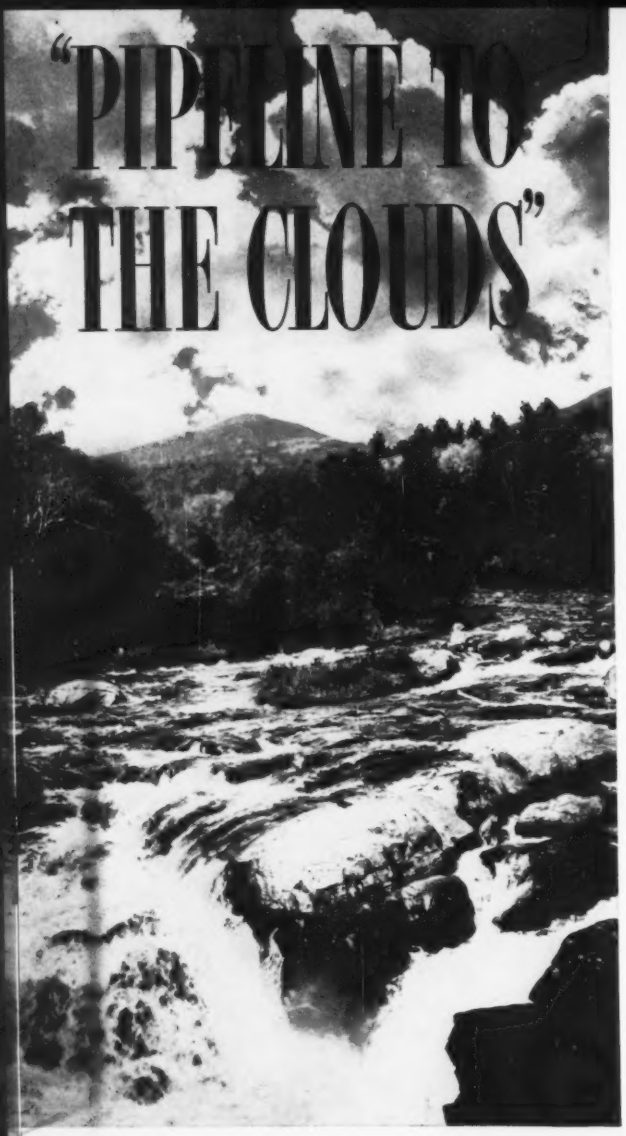


New G-E film highlights water supply problems

—opens new way for electric utilities to aid community growth

Newest in the "More Power to America" series, General Electric's full-color, 25-minute sound motion picture, "Pipeline to the Clouds," is the star feature of a public service program that dramatizes the importance of water to the individual and the community.

Speaking at its first showing, Dr. Leonard A. Scheele, Surgeon General, U. S. Public Health Service, underscored today's problems when he stated that "the demand for water is now four times as great as it was 50 years ago. Since 1900, average per capita consumption has leaped from 50 to nearly 200 gallons a day."

It is estimated that facilities necessary to bring the nation's water systems to a satisfactory level may require an additional 6 to 8 million kilowatts of electric power within the next few years.

"Pipeline to the Clouds" not only points up the reasons for many community water supply problems, but also prescribes the means of combating actual or potential shortages. The film was produced with the assistance of the American Water Works Association and the U. S. Public Health Service.

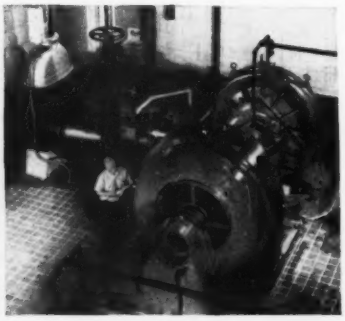
Many utilities will welcome the opportunity of sponsoring this film as an excellent public relations project. Full information can be obtained from the nearest G-E Apparatus Office or General Electric Company, Schenectady 5, N. Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-174

"Water supply is everybody's business"—W. V. O'Brien (GE) chats with Dr. Scheele (right), at press preview. At left are H. R. Waltrath (GE) and Charles H. Capen, V-P of American Water Works Assn.



Giant electrically operated pump, shown in film, is one of the evidences of the important part played by electricity in providing adequate supplies of clean, pure water. Thousands more are needed.

"Don't you know there's a water shortage?" A human interest incident in the film, highlighting one of the penalties of inadequate water supply. Cameramen ranged from Death Valley to Vermont shooting film.

The Electrical Week

INDUSTRY MOBILIZATION (Page 14)—NPA and Depa have agreed on a schedule limiting the use of molybdenum in boilers and other power equipment . . . Depa and FPC have coordinated their data-gathering activities, thus saving utilities time . . . DPA is studying where the power expansion program of the industry can be cut . . . The government will tap its aluminum stockpile to aid industry.

WASHINGTON—Wisconsin-Michigan Power Co gets FPC permission to build 4,800-kw hydro project on Michigamme River (p 5) . . . Vacancy on TVA board may be filled by recess appointment (p 13).

ELSEWHERE—Yields on utility bonds turn downward (p 4) . . . Roanoke Rapids decision lets utilities build hydroelectric projects on federal basin areas (p 5) . . . Iowa utilities are building a state-wide grid, IUA conference is told (p 6) . . . Utility management is looking more and more to its engineers, C. B. McManus tells SEE conference (p 11) . . . After three years of day-to-day purchase, Pacific Gas & Electric Co and Bureau of Reclamation have signed ten-year contract on sale of power (p 12) . . . Curtailment of watthour meter production has been slight so far, joint EEI-AEIC committee hears (p 13) . . . Wilson revises some of his mobilization goals (p 30).

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Latest from Washington—Consideration of the Central Arizona project has been postponed by the House Interior Committee until next February at the earliest . . . Interior Secretary Chapman has asked Congress to approve construction of the 1.4-million kw Hells Canyon project at an estimated cost of $357 million . . . Army Engineers claim huge savings as a result of adopting new procedures for clearing timber from reservoir sites . . . The Navy will send a 10,000-kw power train to Puget Sound Naval Shipyard, Bremerton, Wash., to assume part of the yard's power load . . . BPA hopes that a Senate committee will begin hearings this week on its plan to build thermal stations . . . Canada's threat to go it "alone" on the St. Lawrence project has moved the House Public Works Committee to reconsider action on the project.

Clients of Ebasco Services are constructing 4.3 million kw of hydro and steam capacity.

Electric Bond & Share will pay Dec. 14 a dividend at rate of 2.2 shares of Montana Power common for each 100 of EB&S—equal to 56¢ an EB&S share.

Superior Court of Pennsylvania denies Duquesne Light's petition for a stay of PUC's order calling for a reduction in revenues totaling $4,163,688 annually from the $7,720,612 asked by company. Pending full hearing of the case in April 1952, court rules no refunds will be made. Company plans to file new rates in compliance with the decision; and, if acceptable to the PUC, new rates would become effective on Oct. 21.

"At no time in World War II did the electric power picture look as dark as it now looks for the fall and winter of 1952," Interior Secretary Chapman told National Press Club at Washington. He added he is not at all worried about future of private utilities, urging reference to securities quotations for utilities which he termed "the highest rated securities there are."

The long-pending purchase of remaining power properties of Puget Sound P&L by PUD's may be completed soon. At Olympia, Wash., Thurston County PUD disclosed it has a power commitment of 35,000 kw from Bonneville Power, contingent upon proposed purchase being closed or agreed upon by Dec. 31. Guy C. Myers declares no purchase offer can be made until certain engineering material is completed.

Inability of Allis-Chalmers Mfg Co to get steel early enough will delay by several months deliveries of turbines and generators for $30-million Rock Island Dam expansion project on the Columbia River near Wenatchee, Wash., R. W. Beck & Associates, advisers to Chelan County PUD reports.

Electric utilities had a record stockpile of 37,438,709 tons of coal on Sept. 1. Coal use in August was 8,955,244 tons; gas use was a record 87,664,138,000 cu ft. Oil consumption declined sharply.

Miscellany—Better street lighting in 13 cities has cut night auto deaths an average of 64% . . . Kansas City P&L asks SEC for order exempting it from Public Utility Holding Company Act. Hearing will be Oct. 19 . . . Wage Stabilization Board in Kansas City approves joint petition of Kansas P&L and IBEW for 3.2% wage hike.

Congratulations—General Electric elects Sam Littlejohn commercial vice president to engage in customer relation activities with headquarters in Cleveland . . . Indianapolis P&L elects R. R. Katterhenry and W. A. Gentry assistant vice presidents.

Yields on Utilities Turn Downward

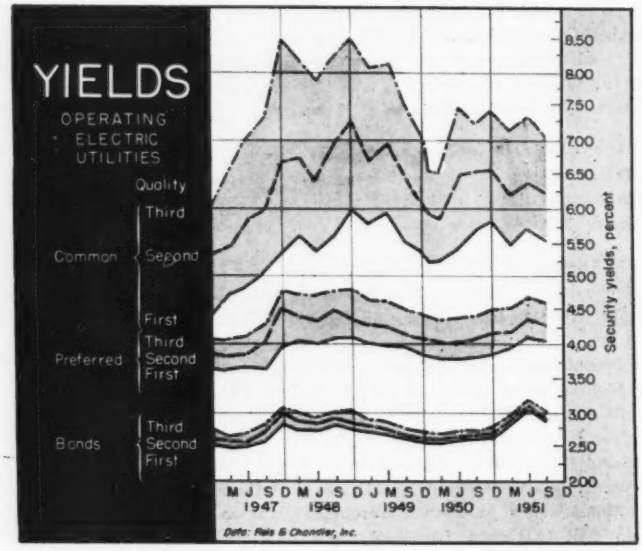
Industry Will Raise About $1,250 Million in New Money in 1951, Close to '49 Total, and Well in Excess of '50's $1,032 Million

The bond market at the end of the third quarter showed considerable improvement from the low point reached at the end of June. Yields on outstanding issues, as reflected in Electrical World indices, gained approximately 0.2%.

However, at the end of September U. S. Treasury obligations began to show weakness with the yield rising 0.05%, and this was carried over to the corporate market. This may provide justification for predictions of several experts that the short-term bank loan rate for prime borrowers might rise from 2½% to 2¾% this fall—a move which certainly would not help long-term bond levels.

Borrowers coming to the market for new funds during the quarter continued to find that substantial concessions from the outstanding yields on existing issues were demanded by purchasers. For example, bidding for two Aa issues on Oct. 2 resulted in public offerings at 3.15% for Public Service Co of Colorado and 3.16% for Idaho Power Co, a rate ¼ of 1% higher than registered at that time for our second quality index with which these two issues are comparable.

Preferred stock yields also declined, in conformity with the bond market, but preferred yields did not rise as much in the first six months of the year as bonds and had less ground to regain. Both bond and preferred yields at the end of September were substantially higher than at the first of the year.



Common stock yields also fell and at the end of the period were at the level of last March. The Dow-Jones Utility Average was up to 45.67 at the end of the quarter, the highest level attained since 1931.

Nevertheless, the utilities did not keep pace with industrial stocks, showing a rise of 11.4% from the end of 1950 to the end of September, 1951, compared with 15.2% for the Dow-Jones Industrial Index.

The current level of utility common stock yields has been attained many times in this 20-year period, but dividend increases over the years have carried prices of many issues upward to new highs.

In the third quarter of 1951 six electric utilities raised their dividend payments through increases in the regular rate or through extras. This compares with two increases in the second quarter, six in the first quarter, and four in the third quarter of 1950 when the Korean outbreak was causing great concern. In the first nine months of 1951 there have been 14 increases and 2 decreases compared with 27 increases and a decrease in the first nine months of 1950 when higher costs, particularly taxes, were less threatening.

Public offerings of securities by electric utilities for new money totaled approximately $117 million compared

Public Offerings of Electric Utility Securities
(Thousands of Dollars)

	Third Quarter		First Nine Months	
	1951	1950	1951	1950
New Money				
Bonds	$78,000	$72,500	$538,234	$451,750
Preferred stocks	2,224	10,878	27,884	153,721
Common stocks	36,985	5,023	263,673	208,865
Total	117,209	88,401	829,791	814,336
Other Than New Money				
Bonds	$	$ 3,600	$ 9,866	$246,050
Preferred stocks				74,948
Common stocks	4,153	4,225	4,153	76,713
Total	4,153	7,825	14,019	397,711
Total				
Bonds	$ 78,000	$76,100	$548,100	$697,800
Preferred stocks	2,224	10,878	27,884	228,669
Common stocks	41,138	9,248	267,826	285,578
Total	$121,362	$96,226	$843,810	$1,212,047

with $88 million for 1950 as shown in the accompanying tabulation. The increase was almost entirely in the common stock category, reflecting the drying up of the demand for new issues of preferred stock coupled with the continued need for large funds construction. Private placements aggregated $45 million in the quarter.

Total public financing for the nine months ended September 30, 1951, rose to $830 million, some $15 million in excess of that raised in the same period of 1950, with 65% of this total represented by bond issues, 32% by common stock, and only 3% by preferred stock.

It appears probable that the industry's debt ratio will rise this year above the 49% level recorded at the end of 1950. Even with construction expenditures slowing up, something in the order of $1,250 million of new money appears likely to be raised this year, approximately the same as in 1949 and well in excess of the $1,032 million in 1950. To accomplish this objective, sales of new securities will have to exceed $400 million in the fourth quarter but this does not seem unlikely with $300 million already scheduled.

The indications are that the preferred market will be reopened. Toledo Edison's offering on Oct. 3 represented the first issue of this type in two months and only the eighth electric utility preferred stock offering thus far in 1951, but several others are planned before the year end.

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Wisconsin-Michigan Gets FPC Hydro Dam License

Wisconsin-Michigan Power Co of Appleton, Wis., has been granted a Federal Power Commission license to construct and operate a 4,800-kw hydroelectric project on the Michigamme River in Iron County, Mich.

The project will include a dam and powerhouse, a substation, and a 69-kv line connecting with the company's Brule plant substation.

Roanoke Decision Lets Utilities Build Hydro Dams in Federal Basin Areas

Private utilities may build hydroelectric projects within a comprehensive government-approved basin plan so long as Congress has not specifically reserved the site for government development.

Furthermore, Department of Interior has no responsibility for trying to kick the privately owned utilities out of such developments.

These were the principal conclusions of the Fourth Circuit Court of Appeals in the Roanoke Rapids case decided Oct. 1. Just how many projects may eventually be involved is anybody's guess, but only one other similar case is now in sight. The decision upheld Virginia Electric & Power Co's license to build a hydro plant near Roanoke Rapids, N. C.

There is a chance the case will go to the Supreme Court, but for the moment the wind has been knocked out of the sails of Interior Secretary Oscar L. Chapman. His attempt to reserve all government-approved power sites for Interior has been temporarily — if not permanently — smashed.

At issue in the Roanoke Rapids case was the validity of the Federal Power Commission license granted Vepco to build a $27 million hydro project on the Roanoke River. The company had first applied for license in October, 1948, and later revised its application after the FPC staff suggested upping capacity of the plant to 91,000 kw and making several other changes.

In asking the court to invalidate the license, Interior argued that since it would be the marketing agency for the power if the plant were built by the government, its interests were at stake. It contended that Congress had withdrawn the project from private development; that the commission itself had approved a comprehensive plan, and thus precluded licensing the project to a privately owned utility. Finally, Interior argued FPC had abused its discretion in granting the license.

WILLARD W. GATCHELL, FPC assistant general counsel, who argued Rapids case successfully for the commission

In a unanimous opinion written by Senior Judge John J. Parker, the court met the arguments one by one:

1. As for Interior's interest in the matter, the court said, "The only responsibility of the Secretary relates to the disposal of surplus power from government projects; and no duty or responsibility with regard thereto can possibly arise until the government has authorized the project and entered upon its construction. Until then he has no more duty or responsibility in this connection than has the Postmaster General."

2. The court agreed Congress had the power to withdraw sites from private development. But it added, "We do not think, however, that the Flood Control Act of 1944 can reasonably be construed as taking over for the United States the construction of the Roanoke Rapids Project. If Congress . . . desired to strip the commission of a great part of its control over the

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important rivers of the nation, it would have done so expressly and not by indirection."

3. As for FPC's previous recommendation of a comprehensive plan, the court said, "The natural resources of the country should not be withheld from needed development because of a recommendation of the commission on which Congress has failed to act."

4. Affirming the FPC license, the court said private construction "will surrender no public assets to anyone, but will merely permit the power company to develop the property which it has already acquired for power purposes and thus utilize a source of power now being wasted."

•

4 Utilities, AEC Confer on Use of Atomic Energy

Representatives from four power companies and several chemical and engineering firms met recently with Atomic Energy Commission officials at Idaho Falls, Idaho, to study industrial use of atomic energy.

In two days of conferences and visits to the Reactor Testing Station they considered civilian building and operation of reactors to produce fissionable materials and power.

Commonwealth Edison Co, Public Service Co of Northern Illinois and their consultants, Sargent & Lundy, Chicago; Pacific Gas & Electric Co, San Francisco; and Union Electric Co of Missouri, were represented at the meetings. Detroit Edison Co representatives met with Idaho AEC officials in August.

Under agreements setting up the study by business and industry, a report to the AEC is to be drawn concerning industry's role in the realization of a materials and power producing reactor.

Costs of the study, to last a maximum of 12 months, are being borne by industry, with the exception of costs to the AEC and its contractors incidental to making information and services available.

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To Build Delta Plant

A 210,000-kw steam generating station will be built at Cleveland, Miss., by Mississippi Power & Light Co. The plant, to be known as Delta Station, will house two 105,000 kw units.

IOWA UTILITIES ASSOCIATION convention drew some top brass. Among those who took part in the sessions were Pres B. F. Pickard, left, Interstate Power Co; Pres G. A. Neal, Iowa Public Service Co; and Vice Pres E. R. Taylor, Hotpoint, Inc

Iowa Utilities Building State Grid, IUA Management Conference Hears

Iowa utilities are going ahead with construction of a transmission grid that will obviate the need for spending taxpayers' money for the purpose, Ed Ruisch, assistant to the president, Iowa Public Service Co, recently told the Management Conference of the Iowa Utilities Association. The meeting was held at Des Moines.

Ruisch participating in a panel discussion said the grid will have ample capacity to deliver hydro power to Rural Electrification Administration cooperatives or municipal systems in the state, should such power become available. He said he doubted there would be any firm power available outside the Dakotas as a result of the Missouri Basin Development.

Missouri Basin projects are being developed more with a view to sound politics than sound engineering, C. P. Conrad, president of Iowa-Illinois Gas & Electric Co, told the panel. He said Montana had its political share of development at Ft. Peck. Ft. Randall, the next project, took care of politics in South Dakota, he said. The next development, from an engineering viewpoint, should have been Oahe in South Dakota, he asserted. But Garrison is next on the program because it is in North Dakota, he contended, and it is better politics to develop this before developing another South Dakota project.

N. B. Gussett, president, Iowa Power & Light Co, said no suitable plan for the Missouri Basin had ever been developed and that money should not be spent there until such a plan was drawn.

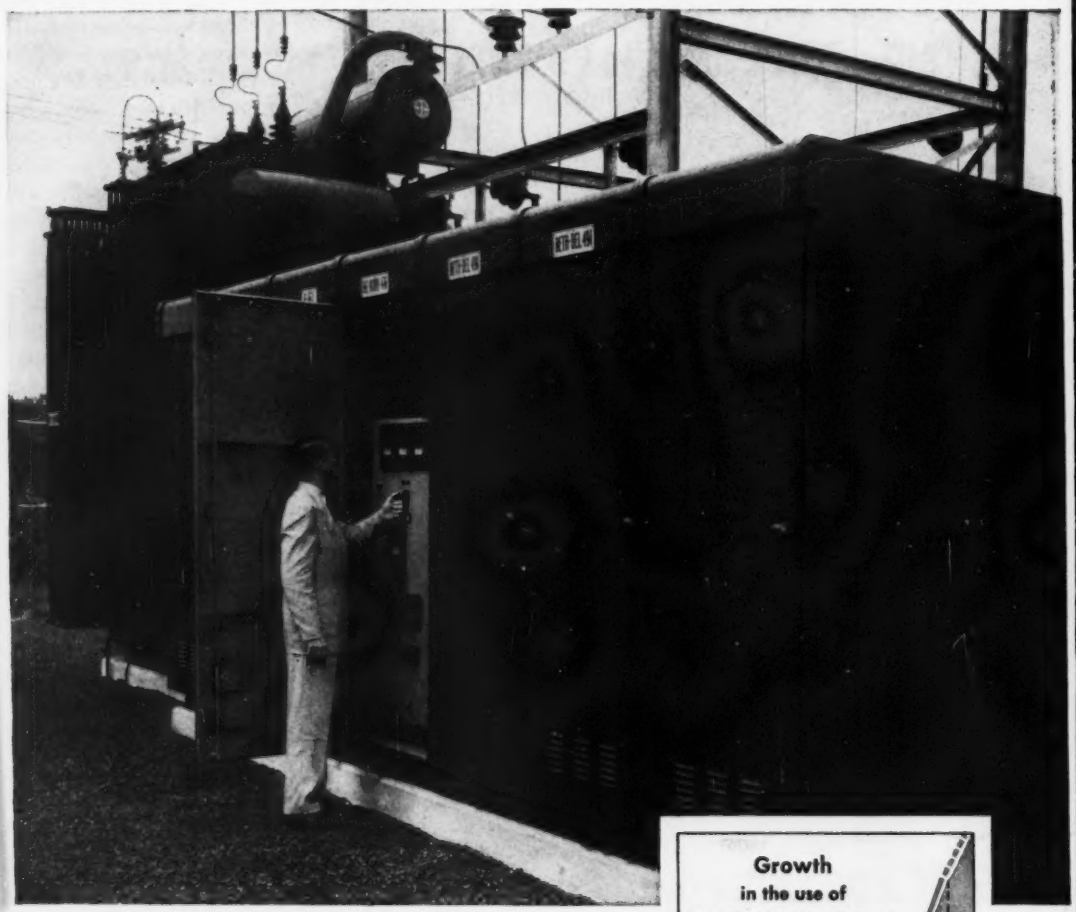
Frank W. Jacobs, vice president, International Brotherhood of Electrical Workers, AFL, said he saw no reason at this time for duplicating power facilities already serving the country. He declared that free labor, free enterprise, and a free nation were synonymous.

There is no substitute for utility merchandising and this was proved by what took place in the appliance business in 1951, E. R. Taylor, vice president, Hotpoint, Inc, declared. He said that in areas where utilities merchandised the appliance business did not slump. Just as 1951 has been a selling year, he said, 1952 will be a selling year.

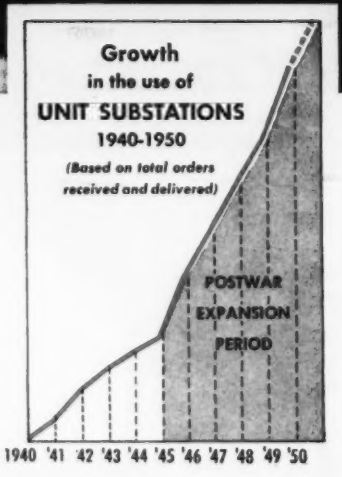
ONLY O-B MAKES INSULATORS AND HARDWARE TO WORK TOGETHER

● There's no divided responsibility when you use O-B suspension insulators and hardware. In the entire insulation industry, only O-B owns its own foundries and forge shops. O-B engineers think in terms of the entire job of supporting a conductor. Design is fully coordinated. Proper fit of parts is assured . . . With full metal manufacturing facilities "under our own roof" we are free to choose materials and processes best adapted to the job, and are not at the mercy of another producer's limitations. . . Physical and electrical testing is thought of in terms of insulators *and* hardware--the *combination* has to work! . . This single responsibility; this thinking in terms of the whole job instead of half of it, costs you nothing extra and pays off in construction savings, performance, and maximum over-all service life. . . Specify O-B insulators *and* hardware.

Niagara Mohawk EXPANDS FAST at

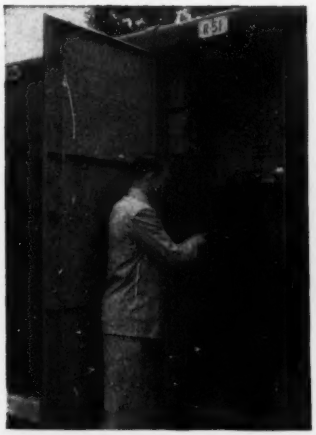


NIAGARA MOHAWK ADDS 10,000 quickly and easily with third and fourth G-E master unit substations (5000 kva each). The one above transforms 33 kv to 5.04 kv. Open compartment door shows operating panel for magne-blast breaker. More details in photos on opposite page.


Growth
in the use of
UNIT SUBSTATIONS
1940-1950
(Based on total orders received and delivered)
POSTWAR EXPANSION PERIOD
1940 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50

WHAT DOES THIS TREND MEAN? Savings in time, money and materials are becoming more and more important. It also means that adaptable compact unit substations have proved to be perfectly suited in cases where "special designs" were thought necessary. You get plenty of flexibility when you use G-E packaged substations.

low cost—with G-E Unit Substations



CIRCUIT BREAKERS are safely and easily removed for inspection. This view shows rear of Niagara Mohawk's new G-E metal-clad transformer main breaker in operating position. Breaker cannot be lowered for removal until it is tripped and power circuit interrupted.

YEARS OF MAINTENANCE-FREE SERVICE ahead for transformers in Niagara Mohawk's new unit substation. Bus regulation of voltage is provided by load-ratio-control equipment. Experience shows G-E LRC equipment requires very little maintenance.

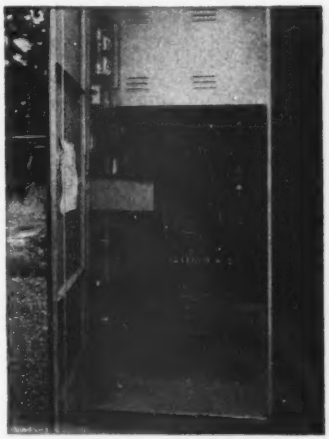
FORESIGHT PAYS OFF again and again. Above is section of older G-E master unit substation installed by Niagara Mohawk in 1939. Growing loads posed no problem—new unit (barely visible, upper left) installed alongside, capacity increased by 5000 kva.

Quick, easy ordering and installation help Niagara Mohawk expand fast to meet increased demand in Albany area

Like many other utilities and industrial plants, Niagara Mohawk Power Corp. has shown it pays to use "packaged" power equipment. In this locality, they've chosen a standard distribution system (in this case: primary network) and a standard load increment, or "building block" of power (5000-kva). As load grows, a duplicate substation of this capacity is tied into the system, always a jump ahead of demand.

A G-E unit substation arrives ready for use—you simply spot in place, connect, and energize. You save not only on equipment and installation costs, but also valuable engineering time to use for over-all planning.

These are just a few reasons for the fast-growing trend to unit substations shown in the chart on the opposite page. Your local G-E representative can show you plenty of others. Call or write him. *General Electric Company, Schenectady 5, N. Y.*



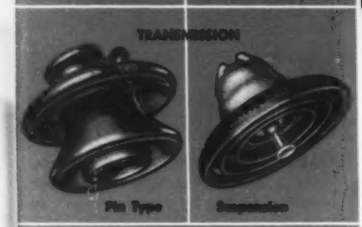
EXTRA $5000 SAVED BECAUSE OF FLEXIBILITY

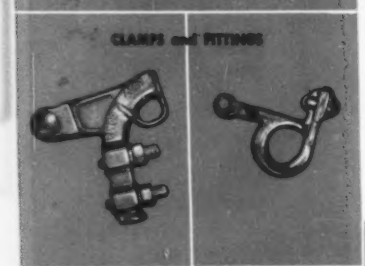
IDEA TO SAVE MONEY: Photo above is close-up of G-E metal-clad auxiliary compartment, installed with rest of Unit Substation. Flexibility permitted Niagara Mohawk to install 48-volt battery, charger, telephone. By doing this instead of using special construction, Niagara Mohawk estimates they saved $5000 to $8000.

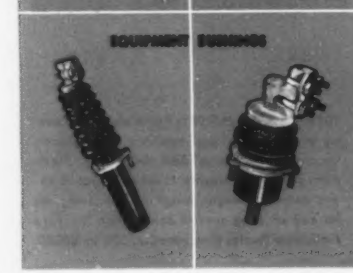
321-80

GENERAL ELECTRIC

PINCO INSULATORS







Installation of Pinco Universal Insulators on West Penn Power Company System.
"Those Pinco L1612 "Universal" Units Sure Make My Job Easier..."

Competitive Tests . . . Service Records Prove Pinco L 1612 "Universal" Insulators Perform Better, Longer . . . Cost Less to Service!

We're mighty proud of the results of the laboratory tests which proved the superiority of the Pinco L 1612. But we were not entirely surprised by the outcome, because service records over a period of *twenty years* of continuous operation back up these findings . . . records which prove that thousands of these Pinco L 1612 Units have been meeting their job requirements 100% in areas where excessive insulator contamination is an operational hazard. Certainly such a record of *trouble-free* performance proves that they're "right" where it counts . . . "right on the job!"

So when you have a tough job for insulators calling for L 1612 characteristics . . . put up Pinco *to be sure!*

IN COMPETITIVE "FOG OPERATION" TESTS

by a Western Power Company, Pinco "Universal" Insulator No. L 1612 proved its superiority by rating:

FIRST on "Fog arc over".
FIRST on sustained voltage "in fog" producing *no* arc over.
FIRST on sustained voltage "in direct spray" producing *no* arc over.
FIRST on both self-cleaning and manual cleaning characteristics.
SECOND on "sluice arc over".
EXCELLENT on radio interference characteristics.

Pinco L1612 & L1925 Features

1. Leakage distance of 17 inches.
2. Outside petticoats, shielded above by bell; below by hood.
3. Long, tapered hood is self-cleaning; acts as spatter-baffle to clean petticoats.
4. In strings, interior of hood is shielded by unit below—protected against contamination thus reducing manual cleaning requirements to a minimum.

See Page 70, Pinco Catalog No. 49 for complete electrical and mechanical characteristics.

The Porcelain Insulator Corporation
765 Main St., Lima, N. Y.
Sales Agents: JOSLYN MFG. & SUPPLY CO.
Offices in Principal Cities

PINCO INSULATORS

Suspension Insulators . . . Switch and Bus Insulators . . . Distribution Clamps . . . Distribution Pin Types and Guy Strains . . . Transmission Line Fittings . . . Tree Insulators . . . Transformer and Circuit Breaker Bushings . . . One Piece and Multi-part High Voltage Pin Types . . . Suspension and Strain Clamps . . . Indoor Bus Support Porcelain . . . Lightning Arrester Porcelain.

SEE CONFERENCE leaders posed for EW between sessions. Standing in left picture are M. H. Fies, Alabama Power Co; W. T. Hess, Louisiana P&L Co (conference chairman); and W. E. Wood, Virginia Electric & Power Co; seated are Pres J. G. Holtzclaw, Vepco; and Pres C. B. McManus, SEE and Southern Co. Standing, right picture: Paul Colby, Ebasco Services; G. C. Rawls, LP&L; and H. B. Robinson, Carolina P&L; seated, Dr P. L. Bellaschi, consulting engineer; and J. A. Rawls, Vepco

Management Looking to Engineers, C. B. McManus Tells SEE Conference

There never was a time when management was so dependent on engineers as today, C. B. McManus, president of The Southern Co, said at the conference of the Engineering and Operation Section of Southeastern Electric Exchange in Richmond, Va., Oct. 4-5.

McManus, also president of SEE, said top utility management needed engineers to guide them in future policies and enable them to provide the necessary capacity for increased loads without spending money before it is necessary.

In reviewing his experiences while Defense Electric Power Administrator, he said the attitude in Washington toward the private utility business was changing for the better because of the way people in the industry have been acting.

The one big problem utilities face today is further government encroachment, according to G. C. Rawls, Louisiana Power & Light Co. He said much could be accomplished if the various companies presented a more unified front. In too many cases, he said, there is the attitude: "My house is not on fire—why call out the fire department?"

Future electrical equipment will have less weight per unit of rating and it will be more efficient, according to A. A. Johnson, Westinghouse Electric Corp. He predicted generator ratings would increase to 300,000-kw in ten years. Gas turbines will be more highly developed, but will not be a major power source in ten years, he said. He said atomic power will be developed, but will be used almost entirely for defense purposes for a long time. Vapor cooling of transformers will be perfected and interrupting capacities for circuit breakers for 15,000,000 kva will appear, he added.

Milton H. Fies, consulting mining engineer, Alabama Power Co, said the opportunities for economy in the production of electricity lie in improvement in coal mining technique, better preparation and drying of coal, and better transportation methods.

Aluminum bronze, although not yet fully field tested, shows great promise as a material for hydro plant turbines since it has good resistance to pitting, according to J. Elmer Housley, Knoxville Power Co. Stainless steel is the best material for this purpose, he said, since it is very hard and it work-hardens under cavitation.

The application of bare ACSR in the Consumers Power Co distribution system has been well established and the saving in construction costs has justified its use, stated G. E. Topping, Consumers Power Co. He said use of bare ACSR results in a substantial saving compared with bare copper.

•

Power Survey Confirms Tardiness in Expansion

Reports that shortages of copper, steel, and steel alloys are slowing the industry's expansion program have been confirmed by Edison Electric Institute. Preliminary figures from EEI's tenth semi-annual power survey released last week indicate that unless the materials supply improves the industry will be 4 million kw behind by the end of 1952. By the end of 1953 the cumulative slippage could be 7 million kw.

Estimated increases in power demands for the next three years showed little change from those in the ninth survey (EW, May 21, p 109). There will be a minute increase in the estimated peak load for 1951. But the estimated peak for 1952 has gone up about 2%, and those for 1953 and 1954 have been raised about 3%.

The survey indicates a nationwide margin of generating capacity in December of about 8%. All regions will have a fair margin except the western division of the Pacific Northwest and parts of the Southeast.

SHASTA DAM on the Sacramento River near Redding, Calif., is the chief source of power in the federal Central Valley Project. Pacific Gas & Electric Co has just signed a ten-year contract with U. S. Bureau of Reclamation for part of its output

Reclamation and Pacific G & E Sign Contract on Central Valley Power

After nearly three years of day-to-day purchase, Pacific Gas & Electric Co and the Bureau of Reclamation have agreed on sale of Central Valley Project power for the next ten years.

The contract supplements a recently executed ten-year "wheeling" agreement (EW, April 9, p 85) providing for delivery of CVP power to certain of the bureau's customers over PG&E transmission lines. Both contracts were signed after years of negotiations in one of the nation's most bitter private-public power battles.

Terms of the contract cover purchase by the utility of power not required for preference customers or federal agencies. This is sold under three classifications—firm, nondependable firm, and surplus. The contract establishes 300,000 kw as dependable capacity for the present CVP system. (This includes Shasta and Keswick Dams with a total nameplate rating of 450,000 kw; Folsom Dam, 54,000 kw, is due on line in 1954.) In effect, the contract firms up capacity to this amount with steam capacity of PG&E. The company can buy dependable capacity remaining from the 300,000 kw after bureau customer requirements are satisfied, plus nondependable and surplus power.

The contract specifies in detail the amount of energy which must be delivered for each kw of capacity sold as firm, the amount varying month by month to reflect the company's annual load requirements. Purpose of this provision is to assure maximum integration with PG&E's large and varied generation.

Charge for this dependable capacity is 75¢ per kw, energy charge is 4 mills per kwhr for the first 130 kwhr per kw, 3 mills for the next 130, and 2 mills for all above 260 kwhr per kw. Nondependable firm capacity, which must be specified by the bureau for a five-month period 60 days before the period begins, is 25¢ per kw, with 3 mills for the first 260 kwhr per kw and 2 mills above. Surplus energy will be sold for a straight 2 mills. The bureau will be able to buy back energy from the company with a 15% handling surcharge up to the amount delivered to the company.

Under terms of the "wheeling" contract the bureau is now selling power to nine northern California public agencies, mostly military installations, with delivery over PG&E lines. It specifically prohibits supplying preference customers or federal agencies located within an incorporated area in which PG&E sells at retail, or any customer outside a specified service area roughly bounded by the Central Valley.

Agencies eligible to buy directly from the bureau include 11 northern California cities which operate their own distribution systems, miscellaneous federal and state agencies, and a scattering of irrigation and utility distribution districts. The cities are all buying power from PG&E under contracts which do not expire until 1954 or later and which the agreement specifically provides cannot be violated.

The power contract will not be formally in effect until approved by the California Public Utilities Commission on behalf of PG&E.

•

July Energy Sales Rise 13.4% Over Last Year

Sales of electrical energy in July exceeded those for the same month a year ago by 13.4%.

Electrical utilities sold 25,663,089,000 kwhr to ultimate customers in July of this year compared with 22,636,887,000 kwhr in July, 1950. Revenue from ultimate customers totaled $457,799,100, or 11% more than the $412,436,800 received in July of last year.

Average usage per residential or domestic customer reached 1,929 kwhr in the 12 months ended July 31, 1951. This represents a rise of 8.8% over the average usage of 1,773 kwhr for the year before.

The average annual bill amounted to $54.78, up 6.2% for the 12 months ended July 31, 1950. Revenue per kilowatthour declined 2.4% from 2.91c to 2.84c.

Classification of Sales, July

Kilowatthour Sales July	Million Kwhr 1951	1950	Per Cent Change
Residential or domestic	5,779	5,034	+14.8
Rural (distinct rural rates)	952	818	+16.3
Commercial or industrial			
Small light and power	4,875	4,277	+14.0
Large light and power	12,729	11,260	+13.0
Street and highway lighting	223	200	+11.6
Other public authorities	637	564	+13.0
Railways and railroads			
Street and interurban railways	250	254	— 1.4
Electrified steam railroads	172	184	— 6.5
Interdepartmental	47	46	+ 0.5
Total to ultimate customers	25,663	22,637	+13.4

Cut in Watthour Meter Production Is Slight So Far, Joint Body Hears

Watthour meter production has had comparatively slight curtailment thus far despite the fact that the meters fall into the twilight zone between defense and civilian manufacture.

This was reported to the recent joint meeting of the Edison Electric Institute and Association of Edison Illuminating Companies meter committees at Lafayette, Ind., by L. C. Blevins, Westinghouse Electric Co, who headed a group of meter manufacturers appearing at the allocations session.

Data on Essentiality Asked

They pleaded for convincing data to prove meters were essential so the allocators won't cut their production programs. The current understanding of meter requirements by Washington agencies could, they said, be lost any moment in the absence of adequate data about the needs. The allotting agencies, they said, are naturally skeptical about statistics compiled solely by manufacturers and also about the validity of an annual demand for three million meters when only one million new homes are built each year.

On the strength of the report the committees moved to collect at once data on the number of 15-amp meters needed in 1952 for new customers and the number required to replace meters now risking burnout caused by their inadequacy to handle consumption increases.

To Make Economic Study

EEI Chairman F. A. Redding, Southern California Edison Co, said the joint committee has a critical responsibility to analyze the economics of all meter department operations. Thereupon the group decided to study the relative merits of district vs date scheduling of meter tests as well as the possible savings in simplifying records, in eliminating company number badges on meters and in mechanized sorting of record cards.

AEIC Chairman F. H. Rogers, Baltimore, said more money could be wasted in unnecessary meter testing than in almost any other utility operation. Several substantiated the assertion by citing the increasing amount of duplicated testing as test periods were lengthened.

Action was taken to recommend that the National Electrical Code be changed to permit use of the new sequence on 480-v self-contained meters provided appropriate grounding is afforded, preferably interconnected with system ground.

In accepting a plaque on his retirement after many years on the committees, J. C. Langdell, Commonwealth Associates, said the meter engineer is still much too reticent about the essentiality of meter departments as a basic factor in utility operations.

•

Output During August Is the Highest on Record

Production of energy by electric utilities in August reached a record high of 32,326,489,000 kwhr, the Federal Power Commission reports. The previous high of 31, 417,782,000 kwhr was recorded in January.

August output was 6.4% above the 30,392,490,000 kwhr produced in July and 11.9% above August, 1950.

Production for the year ended Aug. 31 reached a record level of 358,861,-218,000 kwhr. It exceeded by 1% the previous high set during the period ended a month earlier and topped output for the year ended Aug. 31, 1950, by 15.2% when output totaled 311,-458,586,000 kwhr.

Water power plants produced 7,816,072,000 kwhr in August, an increase of 3.7% over the same month a year ago. As a percentage of the August total production, water power output decreased from 26.1% last year to 24.2% this year. Fuel plants produced 24,510,417,000 kwhr during August.

•

TVA Job May Be Filled By Recess Appointment

The vacancy on Tennessee Valley Authority's board of directors will probably remain open until after Congress adjourns. By making a recess appointment, President Truman could assure his nominee a salary until action is taken by the Senate on confirmation. If the nomination is made while Congress is in session, the salary doesn't begin until the appointment is confirmed.

The President recently withdrew the name of Frank A. Waring for the post after two Southern Senators from the TVA area expressed disapproval.

SQUIRREL KNOCKS OUT POWER; power knocks out squirrel. Pennsylvania Electric Co had an hour-and-a-half, mid-day interruption of service in the Erie area recently when the animal climbed atop a substation and began gnawing at a 13.8-kv bus

CHARLES F. KELLS, left, takes leave of Franz Stone, right, assistant NPA administrator. Otis Howard, center, manager of operations for Oklahoma Gas & Electric Co, has replaced Kells as director of NPA's Engine and Turbine Division

New NPA-Depa Schedule Limits Use of Molybdenum in Boilers, Turbines

A schedule specifying the use of molybdenum in the manufacture of high pressure, high temperature boilers, turbines, piping, and associated equipment has been issued by the National Production Authority and the Defense Electric Power Administration.

For superheater tubes, austenitic materials may be used only for equipment subject to metal temperatures exceeding 1,100 F. Use of 1% molybdenum is allowed where the metal temperature exceeds 1,000 F, 0.5% is allowed for tubes subject to 850 F at 600 psi, 800 F at 1,600 psi, and 775 F at pressures of 2,000 psi or more.

Use of molybdenum in manufacturing headers, connectors, valves, and piping, forgings, and castings is slightly more liberal because of the extra hazards involved.

All limitations on the use of the metal are within the requirements of the ASME boiler code and the ASA power piping codes. The specifications will prevent utilities and plant designers from asking for alloys where they are not needed.

Exceptions will be considered where chromium is added for corrosion-erosion resistance in certain items. The exceptions, if granted, will be based on corrosion-erosion notations shown on the purchase orders.

The temperature or "corrosion-erosion service" must be specified in all electric utility orders for high pressure, high temperature piping or equipment containing molybdenum. Following such a notation on the purchase order, the utility should also add the phrase "Reference DEPA Industry Letter Number 25." Where orders have already been placed, this information should be furnished the steel mills.

In cases where this order will unduly delay delivery or will mean the scrapping of equipment already fabricated, Depa is prepared to make some exceptions. For such relief utilities should write direct to Depa and refer to Industry Letter 25.

•

Aluminum Reserve Tapped

Because 3,000 tons of aluminum has been lost to the power shortage in the Northwest, the government will divert metal from its military stockpile to meet fourth quarter allotments to industry. A Munitions Board official said the government may do the same in the first quarter of 1952.

FPC Data Will Serve Depa, Save Utilities Time

Electric utilities should have an easier time of it now that Defense Electric Power Administration and Federal Power Commission have agreed to coordinate their data-collecting activities.

Depa formerly gathered its power supply and requirement data with its Advisory Committee helping out. Under an agreement worked out during the summer, the agency will depend largely on regular FPC figures, plus occasional special studies.

Main points of the agreement:

1. Both agencies will use the same regional boundaries.

2. December, 1950, will be considered the base period for reconciliation of any differences in loads and resources by FPC regions.

3. Basic records of FPC such as Forms 1, 12, and 12-3 are to be accepted as sources of information on the industry's power supply and requirements, present and estimated future, subject to such modification as may be agreed upon.

4. The two agencies will review monthly supply and load figures, with Depa making any adjustments.

5. FPC will undertake special investigations requested by Depa and approved by the Budget Bureau.

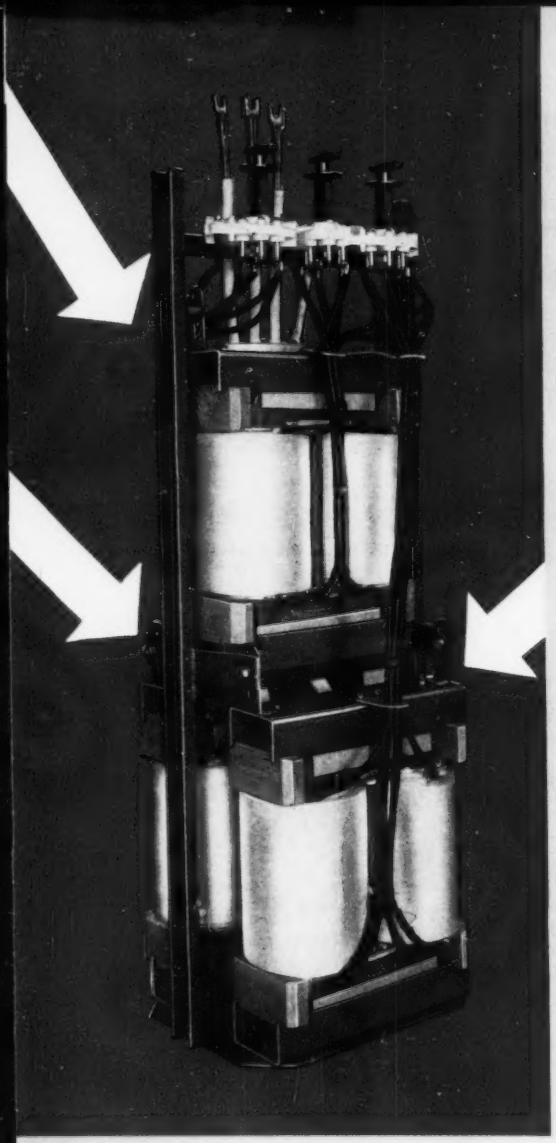
6. The electric utility defense advisory council will be asked to make arrangements for effective and continuing liaison with regional FPC offices in connection with power supply and requirements data.

•

DPA Group Seeks Place to Cut Power Program

The three-year, 27-million-kw electric power expansion program is in for a revamping if Defense Production Administrator Manly Fleischmann has his way. For several weeks a DPA committee has been reviewing the program to bring it into line with materials available to prosecute it.

Edward W. Morehouse, vice president of General Public Utilities Corp; Ralph Booth, a Boston engineer; Herbert Marks, a World War II Office of War Utilities lawyer; and G. O. Wessenauer, manager of power, Tennessee Valley Authority, make up the committee.



Three single-phase core-coil assemblies, one above and two below, for simplified mounting and best cooling. Rigidly held in strong channel-steel frame which fits into steel channels welded inside tank wall.

It's easy to replace any one unit in L-M 3-PHASE ROUND WOUNDS®

L-M Round-Wound transformers have exceedingly high impulse strength and overload capacity so that burnouts are extremely rare. But if a coil *should* burn out, you don't have to replace the whole transformer. The core-coil assembly from any one phase is simply removed from the rack and a replacement unit quickly installed.

It's as simple as that, and almost as quick . . . whether it's done in your own shops or in one of the authorized L-M Transformer Service Shops near you.

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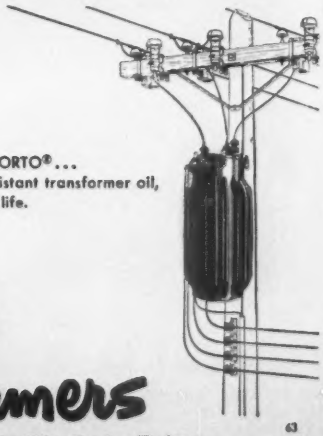
Besides the advantages of rapid core-coil replacement and fast service restoration, L-M 3-phase transformers give you all the desirable Round-Wound performance features . . . with the wound core that isn't cut or disturbed in any way after annealing . . . with the round coils wound right onto the core. An L-M "exclusive!"

Get the whole story. Ask the L-M Field Engineer or write Line Material Company, Transformer Division, Zanesville, Ohio (a McGraw Electric Company Division).



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Complete Coordinated Equipment for Distribution Today

63

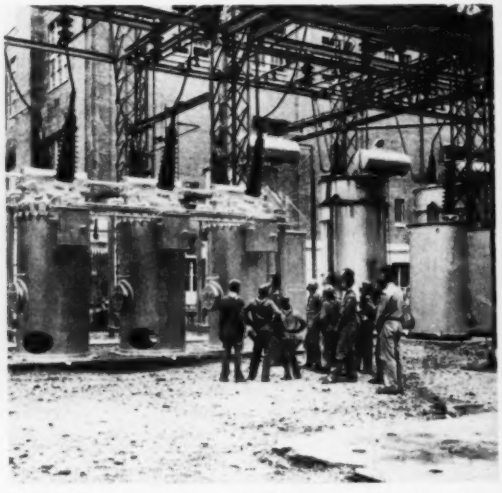
SWANNANOA TROOPS 28 and 45, a hundred strong, fall in for the camp trip

LEAD BUS gets signal to move out on 85-mi

On Top of Old Smoky

INDIANS who trod the Great Smokies three centuries ago would be amazed to see the Pigeon River dive into an under-mountain tunnel and emerge six miles away at Walters Hydro-electric Plant of Carolina Power & Light Co. So were 100 Boy Scouts from Asheville, N. C., who recently trekked to the isolated plant on the Tennessee line. The company brought the scouts in on wheels, rather than on foot, Indian-fashion, but they did rough it overnight by pitching their tents on a wooded slope above the power house. Next day they trooped through the 145,000-kw installation and learned how the electricity they use is made. Scout trips are an annual thing with CP&L. This past summer three groups from the company's Western Division week-ended at the Walters Plant where they learned powercraft while enjoying woodcraft.

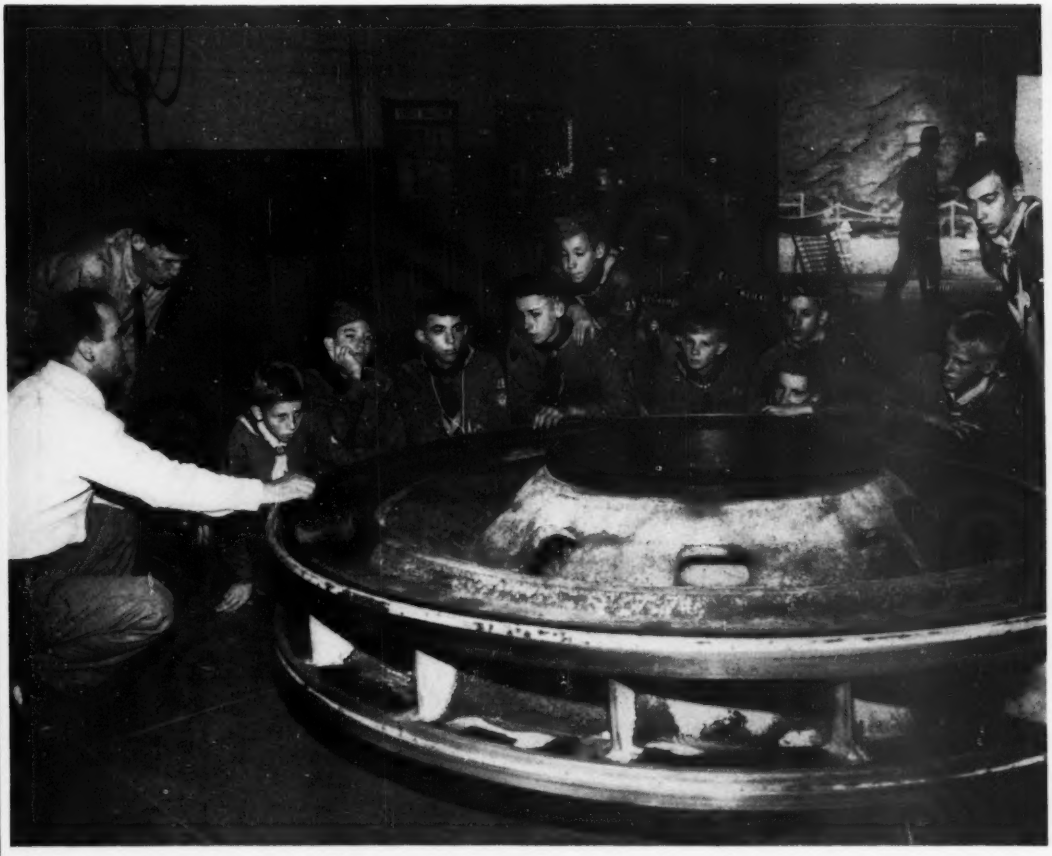
SIX-MILE TUNNEL from 180-ft dam feeds plant's turbines



BREAKERS and transformers dwarf scouts making plant tour

drive over the mountains to Walters Plant

SCOUTS pitch camp above plant on northern edge of Great Smoky Mts National Park



FUNCTION of a large turbine is explained to the scouts by Charles Moore (left), a plant employee. Boys listen intently

Here is the world's most faulted power system!

This system begins and ends inside our High Power Laboratory. It owns only a few hundred feet of conductors, yet it has been faulted almost 250,000 times—deliberately!

It gets this purposeful punishment because it was erected specifically to serve *you* . . .

For into this miniature system of ours we connect every new interrupting device design. Here they are repeatedly subjected to all fault currents they might be expected to interrupt in actual service. And out of this testing comes the valuable data that enable us to prove . . . and to constantly improve . . . the equipment we build for you.

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"De-ion®" Grid Interrupters
10,000,000-kva Interrupting Capacity
3 and 5 Cycle Interrupting Time
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Smaller Tanks—Less Oil

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YOU CAN BE SURE.. IF IT'S
Westinghouse
CIRCUIT BREAKERS
WITH "DE-ION" GRIDS

TVA, Mississippi P&L Sign Interchange Pact

A 15-year power interchange agreement has been signed between TVA and the Mississippi Power & Light Co to provide better coordination of the two systems and to take advantage of diversity of loads.

MP&L is now supplying TVA with 100,000 kw of power primarily for use at the Oak Ridge atomic energy plant. While this is a temporary arrangement, the supply of power will continue until next spring under the new long-term agreement.

MP&L and TVA systems are interconnected at Memphis, Tenn., and Batesville, Miss. MP&L serves 400 communities and eight cooperatives in 44 counties in western Mississippi.

•

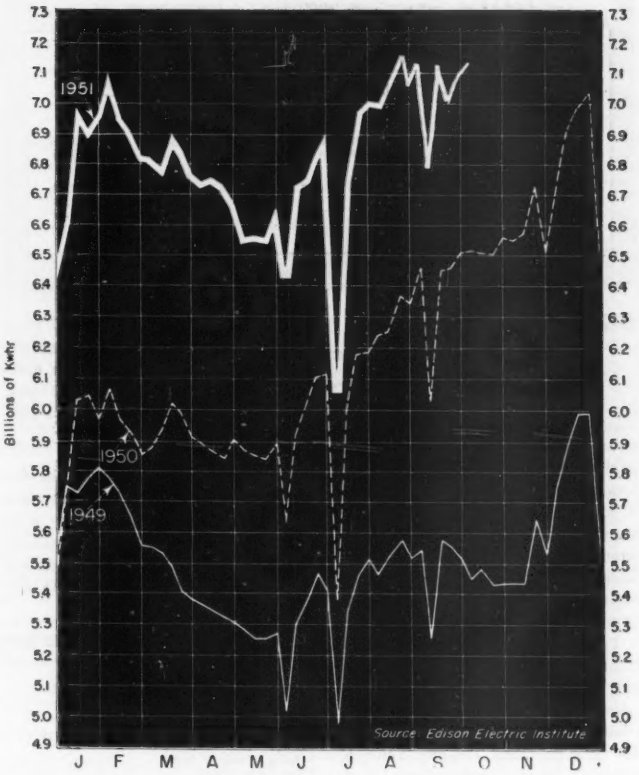
Utility Grants Pay Boost

About 1,000 Appalachian Electric Power Co workers in Virginia and West Virginia will receive a wage increase of 8¢ an hour under an agreement reached by the utility and the International Brotherhood of Electrical Workers, AFL. Retroactive to Sept. 1, the raise was negotiated under a reopening clause in the contract.

•

Duke to Add 270,000 kw

Duke Power Co has announced it will add two 135,000-kw units to its Buck Plant on the Yadkin River near Spencer, N. C. The units, to be installed by 1954, will bring total capacity of the plant to 470,000 kw.



Output Week Ended Oct. 6—7,155,921,000 Kwhr

Weekly Output, Millions Kwhr

1951		1950		1949	
Oct	6 7,156	Oct	7 6,514	Oct	8 5,450
Sept	29 7,102	Sept	30 6,503	Oct	1 5,521
Sept	22 7,014	Sept	23 6,457	Sept	24 5,556
Sept	15 7,138	Sept	16 6,449	Sept	17 5,579
Sept	8 6,795	Sept	9 6,029	Sept	10 5,258
Sept	1 7,146	Sept	2 6,459	Sept	3 5,544
Aug	25 7,077	Aug	26 6,346	Aug	27 5,523
Aug	18 7,164	Aug	17 6,370	Aug	16 5,579
Aug	11 7,070	Aug	12 6,253	Aug	13 5,530
Aug	4 7,003	Aug	5 6,247	Aug	6 5,466

Per Cent Change from Previous Year

	Oct 6	Sept 29	Sept 22
New England	+ 5.1	+ 1.6	+ 3.0
Mid-Atlantic	+ 8.7	+ 6.7	+ 8.9
Central Industrial	+ 6.2	+ 5.7	+ 5.3
West Central	+10.7	+11.6	+ 8.5
Southeast	+12.0	+13.2	+11.6
South Central	+26.5	+24.4	+12.9
Rocky Mountain	+10.5	+11.2	+ 8.3
Pacific Coast	+ 8.9	+ 8.1	+10.5
Total United States	+ 9.9	+ 9.2	+ 8.6

MEETINGS

International Association of Electrical Inspectors
Southern Section, Hotel John Marshall, Richmond, Va., October 15-17.

National Association of Railroad and Utilities Commissioners
Annual Convention, Francis Marion Hotel, Charleston, S. C., October 16-19.

★**Public Utilities Advertising Association**
Region 4 Meeting, Hotel Cleveland, Cleveland, Ohio, October 18-19; Region 7 Meeting, Edgewater Hotel, Madison, Wis., October 22-23; Region 2 Meeting, Advertising Club of New York, New York, N. Y., December 7.

Pennsylvania Electric Association
Joint Relay-Communications Committee, Emerson Hotel, Baltimore, Md., October 18-19; Electrical Equipment Committee, Penn Alto Hotel, Altoona, Pa., October 22-23; Meter Committee, Arlington Hotel, Oil City, Pa., October 25-26; Prime Movers Committee, Fort Stanwix Hotel, Johnstown, Pa., November 1-2; Systems Operation Committee, Split Rock Lodge, Split Rock, Pa., November 8-9.

National Association of Corrosion Engineers
South Central Region Meeting, Robert Driscoll Hotel, Corpus Christi, Tex., October 18-20.

National Electronics Conference
Annual Conference, Edgewater Beach Hotel, Chicago, Ill., October 22-24.

American Standards Association
Annual Meeting, Waldorf-Astoria, New York, October 22-24.

University of Texas
Power Distribution Conference, Lower Colorado River Authority Auditorium, Austin, Tex., October 22-24.

American Institute of Electrical Engineers
Fall General Meeting, Hotel Cleveland, Cleveland, Ohio, October 22-26.

Southeastern Electric Exchange
Sales Conference, Roosevelt Hotel, New Orleans, La., October 31, November 1-2.

Electrical Inspectors' Association of British Columbia
Annual Conference, Hotel Georgia, Vancouver, B. C., November 2-3.

Northwest Public Power Association
Accounting Section, Governor Hotel, Olympia, Wash., November 8-9.

National Electrical Manufacturers Association
Chalfonte-Haddon Hall, Atlantic City, N. J., November 12-15.

★**California Municipal Utilities Association**
Annual Conference, Hotel Leamington, Oakland, Calif., November 13-16.

Wisconsin Utilities Association
Electric-Gas Sections, Sales-Engineering Divisions, Schroeder Hotel, Milwaukee, Wis., November 14-16.

New Jersey Utilities Association
Annual Meeting, Seaview Country Club, Absecon, N. J., November 15-17.

American Society of Mechanical Engineers
Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., November 25-30.

Pacific Coast Electrical Association
Annual Hawaiian Conference, Royal Hawaiian Hotel, Honolulu, T. H., November 29-30.

★Addition this week.

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE 1951									
Oct. 4	2.88	2.91	3.07	4.08	4.28	4.63	5.49	6.21	7.04
Sept. 27	2.87	2.91	3.04	4.05	4.27	4.61	5.52	6.24	7.05
END OF QTR.									
3rd 1951	2.87	2.91	3.04	4.05	4.27	4.61	5.52	6.24	7.05
2nd 1951	3.02	3.11	3.23	4.11	4.37	4.68	5.73	6.38	7.78
1st 1951	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44

Data: Reis & Chandler, Inc.

Utility Offer to Buy Plant Rejected by Tallahassee

Voters in Tallahasee have voted 4 to 1 against Florida Power Corp's offer to buy the city's new $5-million steam power plant. The election was held after the City Commission, by a vote of 3 to 2, proposed the sale.

The election stirred considerable interest in the city as evidenced by the large turnout—2,381 persons out of 3,060 registered. The vote was 1,858 against the sale, 451 in favor of it. Some of the ballots were invalid.

Tallahassee has been buying power from Florida Power and retailing it over its own municipal distribution system. At discussions of a new power contract, the city and the utility could not agree on rates. The city then sold bonds to finance construction of its own generating plant. Recently Florida Power offered to purchase the plant and pay off the bonds, claiming it could provide Tallahassee with power cheaper than the city could generate its own.

In Kentucky, the State Public Service Commission has approved the sale by Kentucky Utilities Co of its gas plants at Paducah and Shelbyville. Western Kentucky Gas Co bought the Paducah plant for $822,078 and the Shelbyville plant was purchased by Shelbyville Gas Co for $28,200.

FINANCIAL BRIEFS

Iowa-Illinois Gas & Electric Co has arranged for $6-million bank loans to finance a year-long construction program . . . **Narragansett Electric Co** asks SEC approval to issue $3.7 million in notes . . . **Pennsylvania Power & Light Co's** recent offering of 542,484 common shares on 1-for-7 basis at $24 per share was substantially oversubscribed . . . **Birmingham Electric Co** has started a "punch card billing" system for its electric customers.

Wisconsin PSC has ordered Lake Superior District Power Co to cut rates $36,787 per annum. Company now gets a 6.62% return on an investment of $15,775,469. PSC said the return was too high and ordered rates adjusted to bring in a 6.10% return . . . **Public Service Co of New Hampshire** is preparing to file with PUC a new schedule to increase rates.

Blyth & Co and **First Boston Corp** were successful bidders for offering by Bankers Trust Co of unexchanged and/or unclaimed stock in Commonwealth & Southern Corp liquidation. Blyth won 110,100 common shares of Southern Co at $11.48 per share which was reoffered at $11.78. First Boston won 18,917 common shares of Ohio Edison Co at $32.265 per share which will be held by First Boston for investment.

Arizona Edison Co and **Central Arizona Light & Power Co** plan merger by exchanging 1¾ common shares of Central Arizona for each share of Arizona Edison. Proposal will be submitted to the stockholders.

Alabama Power Co delivered to the State Department of Revenue a check for $516,307.58 in payment of 1951 kilowatt hour tax.

Electric Utility Financing

Company	Description	Amount of Offering (000)	Offering Price	Yield at Price to Public
	WEEK OF OCTOBER 4-10			
Bonds				
Arkansas Power & Light	1st mtg, 3⅝%, 1981, new money	$ 8,000	103.254%	3.45%
Pennsylvania Electric	1st mtg, 3⅛%, 1981, new money	5,000	101.625	3.29
Preferred Stock				
Pennsylvania Electric	30,000 sh 4.70%, new money	3,000	$103.25	4.55
	WEEK OF OCTOBER 11-17			
Bonds				
Nashville, Tenn.	electric revenues, 1954-1981	$ 3,500		
New England Gas & Electric Association	coll tr, 1971	6,115		
Preferred Stock				
Public Service Electric & Gas	249,942 sh	24,994*		
Common Stock				
Central & Southwest	500,000 sh			
*Louisville Gas & Electric	130,000 sh			
	SCHEDULED OCTOBER-NOVEMBER			
Bonds			Bid Date	
Wisconsin-Michigan Power	1st mtg	$ 3,500	Oct. 22	
Rockland Light & Power	1st mtg	6,000	Oct. 24	
Utah Power & Light	1st mtg	9,000	Oct. 29	
Ohio Power	1st mtg	15,000	Oct. 30	
Ohio Power	serial notes	7,000	Oct. 30	
West Texas Utilities	1st mtg	8,000	Oct. 30	
Florida Power & Light	1st mtg	10,000	Nov. 14	
Gulf States Utilities	1st mtg	10,000	Nov. 20	
Preferred Stock				
Pacific Gas & Electric	1.5 million, 1st preferred, $25 par	$ 37,500	Oct. 22	
Long Island Lighting	100,000 sh $100 par	10,000	Nov. 7	
Common Stock				
Public Service of Indiana	324,656 (1-for-10, record Oct. 8, $28.125)	9,131	Oct. 24**	
Consumers Power	561,517 (1-for-10, record Oct. 17)		Nov. 2**	
Long Island Lighting Co	524,949 (1-for-7, record Oct. 24)		Nov. 8**	
	UNSCHEDULED—UNDER CONSIDERATION			
Bonds				
Central Maine Power	1st and general mtg	$ 7,000		
Common Stock				
Public Service Co of New Hampshire	150,000-200,000 sh			
Central Maine Power	315,146 sh (common 1-for-7 and $6 pfd 7-for-5)			

* Negotiated Sale
** Expiration Date

IN THE INDUSTRY

FISCHER BLACK

In the lead editorial in the May 7, 1951, issue of Electrical World we announced the formation of an unofficial Coordinating Committee made up of the top executives of the five country-wide industry organizations. At the same time EW proposed that "the members of this group should be officially selected to speak for the group they represent. Then the second step of industry coordination would be complete. Related activities of Reddy Kilowatt and other industry groups should be handled appropriately. The selection of one man from the Coordinating Committee as chairman who as an individual could speak for the industry would perhaps be the next step.

"Through these steps the agencies can work toward the ultimate goal of strong leadership with a small coordinating group providing the conscience of the industry."

Gadsby Backs Coordination

The following month George M. Gadsby, president of the Utah Power & Light Co, became president of Edison Electric Institute. In an exclusive on the record interview with Electrical World editors, Gadsby said that to take this story to the man on the street, he believes there must be more and better coordination between the industry's several service organizations and EEI. He will not sponsor the merging of these various groups. On the other hand, he feels that individual company leaders must be better informed on issues facing the industry. Coordination can accomplish this.

Thus we have the sequel to the original announcement and proposals of Electrical World.

To date, the Coordinating Committee has justified itself 1,000% in bringing together the various industry factions and unifying their purpose and objectives to an extent never before dreamed of. But, as is typical of the leaders of this great industry, their announcements are far too meager and subdued. But we give you their own restrained statement regarding the current status and activities of the Coordinating Committee representing EEI, National Association of Electric Companies, Public Information Program, Electric Companies Advertising Program, and the Association of Edison Illuminating Companies.

The Coordinating Committee's Press Notice

"Exchange of information regarding plans and projects is being facilitated by a coordination committee of the various agencies and organizations serving the electric companies, according to an announcement by George M. Gadsby, president of the Edison Electric Institute.

"Periodic meetings of both top level and staff personnel of the principal organizations engaged in various aspects of research, technical activities, public information, and advertising for the electric industry will help to correlate activities having a common objective and thereby avoid possible duplication of effort.

" 'It is hoped to make substantial savings in travel time of committee members by scheduling meetings of the several groups in sequence and in the same location,' Mr Gadsby said."

We compliment the industry leaders and the service organizations who have made the substantial progress to date in coordination of industry activities. It is hoped that they will go much farther in correlating "activities having a common objective."

TECHNICAL NOTES

ARCHER E. KNOWLTON

Cooling tower timber may be adversely affected by the alkalies introduced to neutralize the acids which would otherwise attack the metals involved.

Interfacial tension test of 208 samples of oil in 3,500,000 kva of power transformers showed 15% below 17 dynes and 28% between 17 and 20 dynes.

Preferred voltage acceptance has been very instrumental in giving utility systems the economic benefits of transformer standardization and mass production.

Forced-oil forced-air cooling is now the vogue for nearly 40% of the power transformer commitments above 50 Mva.

DBPC may be adversely affected by too high a temperature of oil rehabilitation by clay because the activation may turn the clay into a catalyst.

Resistance to fire and explosion is one of the best reasons for using a sealed dry-type transformer.

Polyvinyl insulation is superior to rubber as resistance to deterioration by oil or acid.

Painting of fence-mesh in a third-degree stage of rust may prove futile; it would be preferable to replace with fresh fabric, preferably metal inherently proof against rust.

Storage battery additives have been comprehensively tested and found to have negligible beneficial effect on charging, voltage, efficiency, operating temperature, or extended life of a "dead" battery.

Reclosure in 20 seconds is possible on a single-phase, two-phase, or three-phase basis (as required) with a European development adopted on a Canadian system.

Doubling or even tripling present generator voltages would reduce the copper content, the mechanical stresses, and the cooling problem.

Flywheels added to mill motors help hold pulverized fuel flames for up to 15 seconds during momentary interruption.

Generators with liquid cooling of the core and coils are attracting more attention but developmental studies are not likely until the emergency passes.

NEWS ABOUT PEOPLE

Dignan Is Executive VP of Boston Ed; Webster Heads Narragansett Electric

T. G. DIGNAN

WILLIAM WEBSTER

R. E. NOCK

C. W. JONES

Thomas G. Dignan has resigned as president of Narragansett Electric Co, Providence, R. I., to become executive vice president of Boston Edison Co. New president of Narragansett Electric is William Webster, executive vice president of its parent company, New England Electric System, and president of Narragansett Electric in 1948.

Ralph E. Nock, vice president of New England Power Service Co and former executive vice president of Narragansett Electric, has returned to Providence as vice president and general manager of Narragansett. Chandler W. Jones, principal officer of four New England Electric System companies in western Massachusetts, also has been named a vice president of the Rhode Island utility.

Dignan joined New England Power Association as assistant general counsel in 1928. From 1930 to 1932 he served as manager of Lowell (Mass.) Electric Light Corp and then became secretary of New England Power. He was made vice president and general manager of the then Worcester (Mass.) Electric Light Co in 1934 and six years later its president.

President of New England Power Service Co, Boston, from 1941 to 1944, Dignan later served as principal officer of ten New England Electric companies in the north Boston area. He became president of Narragansett Electric in 1949.

Webster, who recently returned to NEES after a leave of absence while serving as chairman of the Research and Development Board of the Defense Department, will continue as executive vice president of NEES. He joined NEES in 1928. Appointed executive vice president of Narragansett Electric in 1935, Webster served in that capacity until 1942 when he became a vice president of NEES. In 1948 he was made president of Narragansett Electric and a year later executive vice president of NEES.

Nock began his utility career in 1912 and became comptroller of United Electric Railways Co in 1928. Joining Narragansett Electric in 1934 as assistant treasurer, he was made executive vice president in 1942. Four years later he was transferred to Boston as vice president of New England Power Service Co and since that time has been vice president and director of personnel administration of NEES and its subsidiaries.

Jones began work for NEES in 1927. Two years ago he became principal officer of four NEES companies. For the past year he has been consultant to Secretary of the Interior Oscar L. Chapman on power problems.

•

J. W. Cryder Is Elected President of the RMEL

(*See Front Cover*)

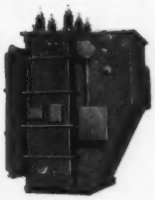
James W. Cryder, president and general manager of Colorado Central Power Co, has been elected president of the Rocky Mountain Electrical League. He succeeds Malcolm C. Heffelman, operating vice president of Public Service Co of New Mexico.

At the association's recent annual

(*Continued on page 27*)

7 Great Features

ALLIS-CHALMERS 5/8% STEP REGULATORS



	AFR Three phase regulator, sizes through 69 kv, 2500 kva.	DFR Single phase regulator, sizes through 6900 v, 250 kva.	JFR Single phase regulator, 11.4 and 38.1 kva, 7620 v.
1 5/8% Steps	✓	✓	✓
2 Close regulation (±1 volt band)	✓	✓	✓
3 Easy control adjustment. The same type control used on all sizes	✓	✓	✓
4 Close average voltage (maintained by voltage integrator)	✓	✓	✓
5 Long life contacts of liberal design to withstand hundreds of thousands of operations	✓	✓	✓
6 Tap changing drive mechanism with balanced spring action to eliminate shock .. operates under oil for long trouble-free life	✓	✓	✓
7 Unit construction to simplify your maintenance requirements.	✓	✓	✓

FOR ALL REGULATION JOBS — from an 11.4 kva regulator on a small feeder to the biggest 2500 kva three phase unit — Allis-Chalmers 5/8% step regulators provide all seven of the quality features checked off above.

That's why you can count on Allis-Chalmers for regulation that helps boost capacity, increase revenue, and improve customer good will.

In addition to these important advantages, 5/8% step regulators require only 1/3 the exciting current of older types of single phase regulators. The low exciting current releases system capacity for useful loads.

Get the complete facts on how Allis-Chalmers 5/8% step regulators can help you from your nearest Allis-Chalmers district office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-3466

ALLIS-CHALMERS

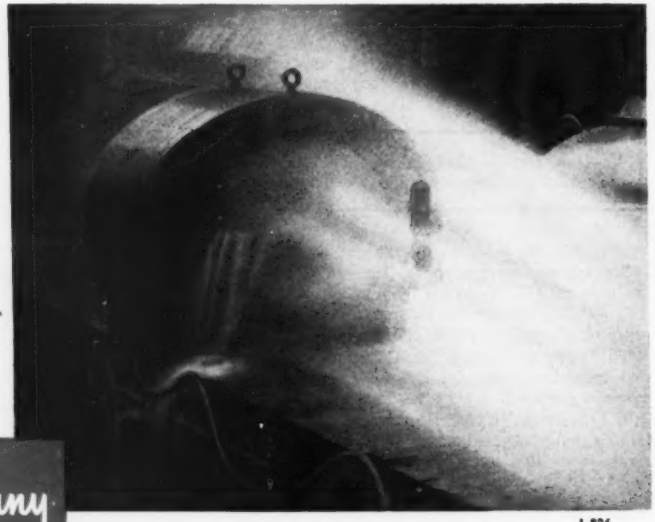
Originators of 5/8% Step Regulation

Revolutionary new Elliott outdoor motor rings the bell!

155,000 HP ON ORDER IN A YEAR AND A HALF!

When we first announced our revolutionary new outdoor motor a year and a half ago, we *knew* it was good. Our customers thought so too! Since that time we have shipped or have on orde over *155,000 hp* of these outstanding motors. They are now delivering dependable power for many types of drives in a wide variety of types of applications from border to border and from coast to coast . . . Day in and day out they operate unprotected in the heat, humidity, sand, alkalies, hurricanes of the South, salt spray of the coastal installations and blizzards of the far North . . . More and more industries are investigating the possibilities of this outstanding motor and the economies of outdoor installation. Available from first size above NEMA frames and larger. Call or write your nearest Elliott District Office for consultation.

Motor undergoing spray test at factory



L-826

ELLIOTT Company
DEPT. EN
Ridgway Division
RIDGWAY, PA.

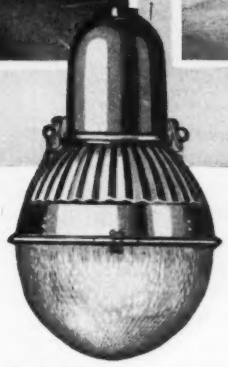
Plants at: JEANNETTE, PA. • RIDGWAY, PA.
AMPERE, N. J. • SPRINGFIELD, O. • NEWARK, N. J.
DISTRICT OFFICES IN PRINCIPAL CITIES

For every part of town...

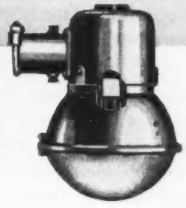
L-M LUMINAIRES

make cities brighter, safer

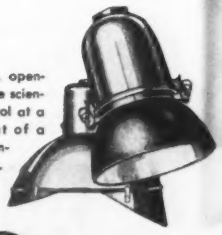
L-M Ovalite—Mercury Vapor Unit. Newly developed optical system assures effective light utilization and good distribution on the street. Mercury vapor lamp is in horizontal position, high up in the reflector to minimize glare. Takes 11,000, 15,000 or 20,000 lumen lamp. Optional magnetic arc control feature keeps arc centered.



L-M Spherolite This famous L-M unit is widely known for its high efficiency, versatility, and many other desirable features. Takes up to 20,000 lumen mercury vapor or 10,000 lumen incandescent lamps.



L-M Spherolite Jr. For better neighborhood lighting at an economical neighborhood price. Interchangeable with Spherolite metal or porcelain heads, permitting low cost installation of the Junior and economical replacement later with the larger luminaire if traffic growth warrants. Has many of the Spherolite features, offers many light distribution patterns.



L-M Directolites Efficient, open-type luminaires that provide scientifically designed light control at a cost little more than that of a radial bowl. Available in symmetric or asymmetric types. For lamps up to 2500 lumens.

L-M provides complete street lighting equipment for all sizes of communities and all kinds of neighborhoods. There are incandescent or mercury vapor units for white way lighting. There are smaller units for residential and outlying sections. A wide variety of reflectors, deflectors and glassware provides complete control for every recommended IES light distribution pattern.

Also available are standards, brackets and mast arms, transformers, control and service equipment.

L-M street lighting engineers have years of experience and L-M's engineering service can provide the answer to your street lighting application problem.

WHICH OF THESE BULLETINS DO YOU WANT?

- ☐ Spherolite
- ☐ Spherolite Jr.
- ☐ Street Lighting Standards
- ☐ Protective Lighting for industrial plants
- ☐ Directolite
- ☐ Controlite®
- ☐ Brackets, Mast Arms, Accessories
- ☐ Mercury Vapor Lighting Units
- ☐ Control Equipment

Ask the L-M Field Engineer for the information you want, or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

65

Ovalite, Spherolite, and Directolite are trademarks

LM

LINE MATERIAL

Street Lighting

C-E REHEAT BOILERS

FAR ROCKAWAY STATION

LONG ISLAND LIGHTING COMPANY

THE C E Unit illustrated here is now in process of fabrication for the Far Rockaway Station of the Long Island Lighting Company at Far Rockaway, Long Island, N. Y.

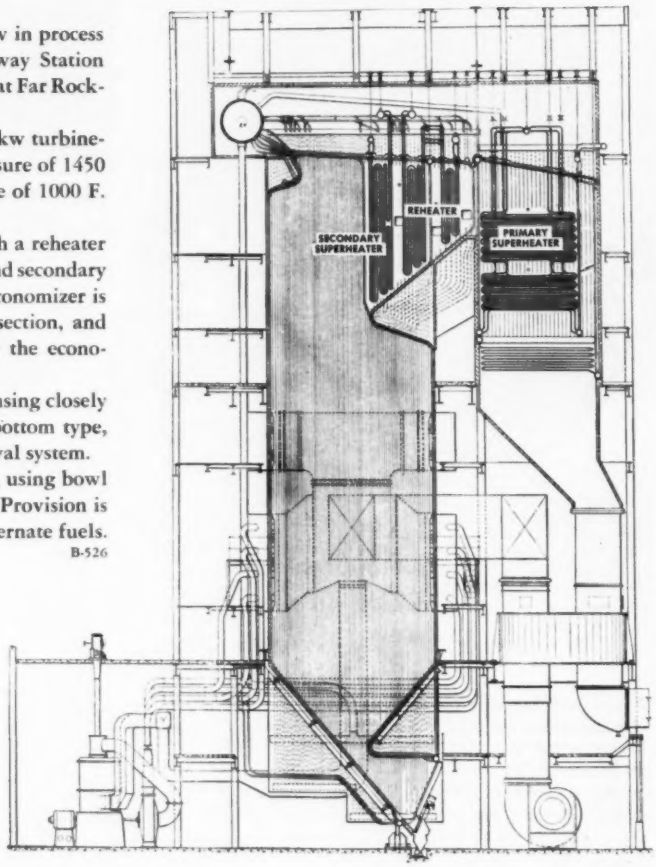
It is designed to serve a 90/99,000-kw turbine-generator operating at a throttle pressure of 1450 psi with a primary steam temperature of 1000 F. reheated to 1000 F.

The unit is of the radiant type with a reheater section located between the primary and secondary superheater surfaces. A finned tube economizer is located below the rear superheater section, and regenerative type air heaters follow the economizer surface.

The furnace is fully water cooled, using closely spaced plain tubes. It is of the dry bottom type, discharging to a pneumatic ash removal system.

Pulverized coal firing is employed, using bowl mills and tilting, tangential burners. Provision is made to use oil and natural gas as alternate fuels.

B-526



C-E

COMBUSTION ENGINEERING—SUPERHEATER, INC.

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ALL TYPES OF BOILERS, FURNACES, PULVERIZED FUEL SYSTEMS AND STOKERS; ALSO SUPERHEATERS, ECONOMIZERS AND AIR HEATERS

News About People

(*Continued from page 22*)

meeting M. M. Koch, Public Service Co of Colorado, and W. L. Breslin, Western Public Service Co, Wyoming, were elected vice presidents for their respective states.

Cryder started his utility career in 1913 with Central Illinois Public Service Co in the meter department and later was transferred to the purchasing department. In 1914 he became associated with Rumsey Electric Co, Philadelphia, where he had charge of sales and service of transformers in five eastern states. In 1928 he joined Floyd W. Woodcock's Group of Electric & Gas Utilities, Philadelphia, as vice president and director of the holding company and officer and director of the operating companies in the group, which was dissolved in 1946. He was elected president of Colorado Central Power Co in 1944.

•

Deardorff Chief Engineer in Dayton P&L Changes

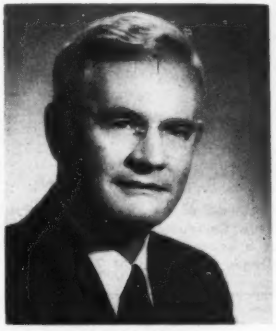
Dayton Power & Light Co has reorganized its engineering staff under the direction of Vice President H. E. Deardorff who has been given the additional title of chief engineer. H. C. Eisler, system planning engineer, has been made assistant to the chief engineer. The new Engineering Division embraces all engineering in connection with production, transmission, and distribution of electric energy.

The former Electrical Engineering Division is now the Electrical Engineering Department with William Shuler remaining as manager of electrical engineering and I. C. Eppley as chief electrical engineer.

H. E. Gismond becomes chief mechanical engineer in charge of the Mechanical Engineering Department; C. R. Dole, chief civil engineer, heads the Civil Engineering Department. These two new departments formerly were the Power Plant Construction Department. Chief draftsman, John Bucher, will direct the Drafting Department.

The Testing Department under J. O. Long, Transmission and Distribution Engineering under W. J. McLain, and Power Plant and Substation under Garland Stamper become sections in the Electrical Engineering Department.

Deardorff joined Dayton P&L as a student in 1917 and later served as



H. E. DEARDORFF

assistant supervisor of electric meters, supervisor of electric maintenance, substation design engineer, and supervisor of electrical testing and system planning engineering. He was appointed vice president in 1947.

Eisler entered the public utility field in 1922 starting in the meter department of Kansas Electric Power Co. He became supervisor of the Emporia Division in 1935 and later district manager. He went to Greenville Electric Light & Power Co, Ohio as chief engineer and then became vice president. He joined Dayton Power & Light Co in 1948 when the company purchased the Greenville properties.

•

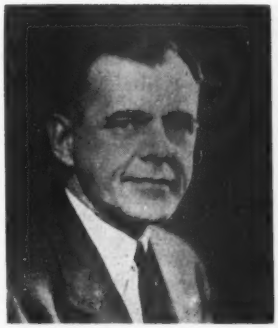
Donald S. Creal has been appointed manager of the Canajoharie district of Niagara Mohawk Power Corp and **Henry J. Sneck** has been named Champlain district manager.

Heads 3rd Company

J. Wesley McAfee, president of Union Electric Co of Missouri since 1941 and Electric Energy, Inc, since early this year (EW, Feb. 19, p 22) has been elected president of the North American Co, New York. He succeeds Herbert C. Freeman who has become chairman of the board. Union Electric is a subsidiary of North America.

Line Material Co Names Wheaton Sales Manager

R. G. Wheaton, manager of the eastern sales division of Line Material Co, Milwaukee, Wis., has been ap-



R. G. WHEATON

pointed sales manager for the company.

R. E. Peterson of the Philadelphia office succeeds Wheaton as manager of eastern sales and R. O. Farrar apparatus engineer in the northern district of the Eastern Division replaces Peterson.

Wheaton became associated with Line Material in 1932 as a sales agent. The following year he joined the company as New England representative. In addition to his duties as sales manager, Wheaton will handle some government contract work.

OBITUARY

Vernon E. (Sam) Vining, 63, Westinghouse Electric Corp appliance division merchandising consultant, died Sept. 29 at Bakersfield, Calif. He worked for Westinghouse between 1936 and 1939 and then became a consultant to the U. S. Treasury on war bond sales.

William G. McKitterick, 69, who retired in 1945 as sales manager and investment counselor of General Electric Co's Lamp Division, Nela Park, Cleveland, died Sept. 21 at Shaker Heights, Ohio. McKitterick joined GE in 1914 and played a leading role in the consolidation of the Edison Lamp Works and National Lamp Works to form the present GE Lamp Division.

MANUFACTURERS and MARKETS

GE Workers Granted 2½% General Pay Boost

Under a labor contract recently approved by General Electric Co and the International Union of Electrical Workers, CIO, 70,000 GE workers in 55 plants will get a general wage increase of 2½%.

The workers are guaranteed a minimum boost of 3½¢ an hour under the agreement. The union originally sought a minimum hike of 4¢ an hour. The pay increase is retroactive to Sept. 15.

The company also will give a cost of living escalator wage adjustment consisting of a 1% increase in wages for each 1% rise in the Bureau of Labor Statistics cost-of-living index between last March 15 and Sept. 15. Cost of living increases after Sept. 15 will be discussed in March, 1952, under a wage reopening clause.

The contract also provides for three-week vacations after 15 years instead of the present 20 and for consideration of the union's demand for higher pensions in September, 1952, instead of 1955 as provided for in the old contract.

•

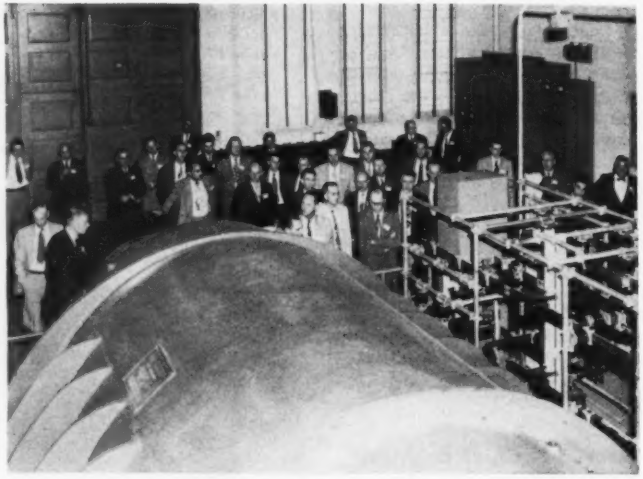
To Make Air Conditioners

The Victor Division of Radio Corporation of America will place three models of home air conditioners on the market in January, 1952. The units—of the window-type, rated at 1/3, 1/2 and 3/4 hp—will be made by Fedders-Quigan Corp, Buffalo, on RCA specifications. The air conditioners will be distributed through RCA's present nationwide distribution facilities. A separate department within the Victor Division will handle sales, merchandising, and advertising activities.

•

Nickel Projects Completed

International Nickel Co of Canada, Ltd, has completed a new shaft and concentrator at its Creighton mine in the Sudbury District in Ontario. The projects, costing $17 million, are part of a long-range expansion program being undertaken by the company. When completed in 1953, the company's underground mines will be able to deliver 13 million tons of ore annually, compared with 5.7 million tons in 1950. The new shaft brings to 13 the number of operating shafts in the underground mines in the Sudbury District. The mill, which concentrates ore before transportation to the Copper Cliff, Ont., smelter, has a capacity of 10,000 tons of ore a day.



OFFICIALS of 63 utilities study 2,600-rpm generator in Line Material Co's Short Circuit Laboratory at Milwaukee. Generator is driven by 800-hp, 2,300-v motor, has a capacity of more than 500,000 kva, and connections to make available voltages up to 15,000 3-phase and with transformer up to 60,000 single phase

•

Loans for Tool Makers

All machine tool manufacturers are now eligible for government guaranteed "V" loans for working capital and plant expansion. Previously only manufacturers who had government "pool orders" were eligible for government financing. Jess Larson, General Services administrator, said the restrictions were relaxed in an effort to crack the bottleneck in machine tools.

Utility Officials Attend Line Material Co Tests

Line Material Co played host last month to 63 electric utility officials and four professors from the University of Wisconsin and Cornell University at their Central Plant at Milwaukee, Wis. The group visited the company's plant on Sept. 17-18 and on Sept. 21-22.

They were invited to participate in a program which included engineering test demonstrations of fuse cutouts, lightning arresters, capacitors, and oil circuit reclosers at Line Material's Short Circuit and Surge Laboratory. The company also took its visitors on a plant tour and conducted a series of lectures.

Earlier 34 members of the Michigan Municipal Utilities Association were guests of the company at Milwaukee. They also witnessed demonstrations of Line Material equipment and were taken on a tour of street lighting installations in the vicinity. The group later inspected the facilities the company maintains for testing street and airport lights.

MANUFACTURING BRIEFS

Aluminum Co of America plans to start construction this month on an aluminum smelting plant at Rockdale, Tex. The company recently received a certificate of necessity from the National Production Authority to go ahead with the $100-million plant. Electric power for the plant will be supplied by a power station to be built and operated by Texas Power & Light Co. which will use lignite for fuel. The metal-producing facilities at Rockdale will be in partial operation late in 1952 and in full operation in 1953. The plant will have an annual capacity of 170 million lb of aluminum.

Reynolds Metals Co is sponsor of "The Kate Smith Evening Hour" on a nationwide television hook-up on Wednesdays and "The Big Show" featuring Tallulah Bankhead over the NBC radio network on Sundays.

SALES ASSIGNMENTS

COMPANY STAFFS

General Electric Supply Corp has appointed E. L. Hall manager of the newly formed Portland district. The district comprises Maine, New Hampshire, and Vermont. D. W. W. Dailey, C. H. White, and H. T. Smith have been named appliance and electronics sales manager, supplies and apparatus sales manager, and operating manager, respectively, of the district.

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Available Metal Supplies

Supplies of basic metals available to U. S. industry, annual rate in tons, are summarized below:

Material	Supply Before Korean War	Now	Estimated July 1953
Steel ingots	100,000,000	105,000,000	118,000,000
Copper	2,070,000	1,840,000	2,091,000
Aluminum	750,000	834,000	1,400,000

The current slump in copper is due to sagging imports. These figures do not reflect the effects of the copper strike.

Metal Prices
Oct. 8, 1951

COPPER, Conn., V., lb	$ .24½
LEAD, N. Y., lb	.19
ZINC, prime Western, E. St. Louis, lb	.19½
TIN, Straits, qual. N. Y., lb	1.03
ALUMINUM, ingot, base price	.19
NICKEL, base price	.56½
STEEL, billets, Pitts., ton	56.00
STEEL, scrap No. 1 heavy, Pitts., ton	45.00

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Arizona and California—Bureau Reclamation, Dpt. Interior, Phoenix, Ariz., repairing turbine runner, Units No. 1 to 4 (inclusive) in Parker Power Plant, at Parker Dam, Calif. Spec. DC-3561.

California—Bureau Reclamation, Dpt. Interior, Bldg. 53, Denver Federal Center, Denver, Colo. furnishing, del. f.o.b. cars shipping point or Roseville, transformers, exchangers, and insulating oil for Folsom Power Plant, Central Valley Proj. Spec. DS-3565. L. N. McClellan, ch. engr.

California—Bureau Reclamation, Dpt. Interior, Bldg. 53, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Sacramento, radio equipment for radio relay stations at Mt. Vaca, Turntable Creek Antioch, Delano, Los Banos, at connections sites; transmitter-receiver assemblies for use on boats, Shasta Power plant, on Bass Mountain for Toyon, Central Valley Proj. Spec. DS 3566. L. N. McClellan, Bldg. 53, Denver Federal Center, Denver, Colo., ch. engr.

Colorado—Bureau Reclamation, Dpt. Interior, Building 53, Denver Federal Center, Denver, furnishing, del. f.o.b. cars shipping point or f.o.b. cars Loveland, bus structure, switchgear assembly, protective equipment cubicle, etc., for Pole Hill Power Plant and Flatiron Power and Pumping Plant, Colorado Big Thompson Proj. Spec. DS-3562. L. N. McClellan, ch. engr.

Colorado—Bureau Reclamation, Dpt. Interior, Fort Collins, constr. Fort Collins, R.E.A. sub-station and access road and addition to Flatiron temporary sub-station Colorado Big Thompson Proj., Spec. 704C-210. L. N. McClellan, ch. engr.

Colorado—Bureau Reclamation, Dpt. Interior, Building 53, Denver Federal Center, Denver, furnishing, del. f.o.b. cars shipping point or f.o.b. cars Loveland, bus structure, switchgear assembly, protective equipment cubicle, etc., for Pole Hill Power Plant and Flatiron Power and Pumping Plant, Colorado Big Thompson Proj. Spec. DS-3562. L. N. McClellan, ch. engr.

Fla., Jacksonville—City, City Hall, aerators extensions and changing aerators control from manual to remote electric control and extension to imprv. McDuff Pumping Station. Plans deposit $6. Reynolds, Smith & Hillis, 227 Park St., engrs.

Georgia and South Carolina—U. S. Eng., Post Office Bldg., Savannah, Ga., constr. 115 kv switchyard, Clark Hill Proj., Savannah River Serial No. CIVENG 09-133-52-21.

Ky., Ford—East Kentucky Rural Electric Co-operative, Winchester, 6 feed water heaters electric generating plant, incl. 2 evaporators. Burns & McDonnell Eng. Co., 95 and Troost Sts., Kansas City, Mo., engr.

Michigan—State Hy. Dpt., 222 Townsend St., Lansing, Zone 13, installing power and lighting sys. at state ferry pier, M Bl of 16-11-22, C29; installing power and lighting sys. at new St. Ignace Ferry Dock, M Bl of 49-8-11, C5. Plans deposit $3 each, M. H. Frimodig, c/o owner, engr.

Minn., Minneapolis—Electric Machinery Mfg. Co., 1331 N.E. Tyler St., expand plant, 821 Second Ave. N.E., incl. addn. of 200 ft. bay for increased electrical-controls output for large motors and generators, 30,000 sq. ft. shop next to Central Ave. and Southeast 8 St., $500,000.

Missouri—Se-Ma-No Electric Co-operative, Mansfield, 69 mi. rural distr. lines, sys. imprvs., Wright Co. $530,000.

Neb., Wayne—City, power plant imprvs. and generating equip. $244,000. H. S. Nixon Eng. Co., W.O.W. Bldg., Omaha, engr.

New Mexico—Roosevelt County Electric Co-operative, Portales, 11 mi. rural distr. lines, 59 mi. new tie line and 18 mi. transmission line, Roosevelt Co., $310,000. H. N. Roberts & Assoc., Lubbock, Tex., consult. engr., M. J. Hilton, c/o owner, engr.

New Mexico and Texas—Bureau Reclamation, Dpt. Interior, Bldg. 53, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Willard, one 34,500 volt, 600 ampere, 500,000 kva interrupting rating, outdoor power circuit breaker, and six 46,000 volt, 600 ampere, single pole, single-throw, hook-operated outdoor disconnecting switches for Willard sub-station, Rio Grande Proj. Inv. No. DS 3559.

N. Y., Freeport—Village Clerk, Municipal Bldg., 46 N. Oceans Ave., Contr. 3, power plant imprvs. Plans deposit $30. Burns & McDonnell Eng. Co., P. O. Box 7088, Kansas City 2, Mo., engr.

Oregon—Bonneville Power Admin., 827 N. E. Oregon St., Portland, construct 115 kv Pendleton line terminal at South McNary sub-station, Umatilla Co., Inv. 6066. Plans deposit $25.

Oregon—U. S. Eng., Pittock Block, Portland, three 48,000 kva 3-phase power transformers for Lookout Point Dam, Lane Co., CIVENG 35-026-52-89.

Washington—Bonneville Power Admin., 827 N. E. Oregon St., Portland, Ore., constr. Benton-Franklin 115 kv transmission line 21 mi. Franklin and Benton Counties, Inv. 6063. Plans deposit $25. L. C. Stewart, 827 N. E. Oregon St., Portland, Ore., engr.

Wash., Copalis—Officer of Public Affairs, State Dpt., 21 St. and Virginia Ave. N. W., Wash. 25, D. C., design, construction, installation and testing of high frequency radio station for Voice of America, $5,000,000.

Wyoming-Montana — Bureau Reclamation, Dpt. Interior, Cody, Wyo., constr. Lovell-Yellowtail 115-kilovolt transmission line, Missouri River Basin Proj., between Lovell, Wyo., and Yellowtail Dam, approx. 30 mi. south of Hardin, Mont., Spec. DC-3555.

Alaska—Chugach Electric Assn. Inc., Anchorage, one step-up outdoor type unit sub-station and one step-down outdoor unit sub-station, at Anchorage, H. W. Beecher, Arcade Bldg., Seattle 1, Wash., engr.

Man., Winnipeg—Chairman Public Utilities Com., City Hall, six 150 kva distr. transformers. W. D. Hurst, City Hall, city engr.

Low Bidders & Contracts Awarded

Ark., Hot Springs—Arkansas Power & Light, Simmons National Bldg., Pine Bluff, Ark., Day Labor, $10,000,000, constr. generating plant at Lake Catherine Plant.

Mass., Pittsfield—H. K. Ferguson Co., Hanna Bldg., Cleveland, O., CA. $1,435,000. plant, (Coltsville) near here. General Electric Co., General Electric Realty Co., 1 Plastics Ave., Pittsfield, Mass. Charles T. Main, Inc., 80 Federal St., Boston, Mass., engr.

Nebr., Omaha—Omaha Public Power Dist., 17 and Harney Sts., Omaha, Neb. Owner Builds. $120,000 sub-station, 18 and Grant Sts. A. G. Johnson, c/o owner, ch. engr.

New Mex., Las Cruces—Coulter Constr. Co., P.O. Box 647, Truth or Consequences, N. M., LB. $134,460, est. $124,905, structures for instrumentation, radar bldg., Askania bldg. power generator bldg. incl. fuel storage and handling facility drives, parking areas, Inv. 29-005-52-5. U. S. Eng., P.O. Box 1538, Albuquerque, N. M. Bids Sept 18.

N. Y., New York—General Electric Co., 1 River Rd., Schenectady, N. Y. CA. $9-136,231, main power equip. at 74th St. Power Station. Bd. Transportation, 370 Jay St., Brooklyn 1, N. Y.

Tex., Greenville—Lima-Hamilton Corp., 1805 N. Industrial Blvd., Dallas, Tex., LB. $448,070. electric generating unit, auxiliaries, and equipment. City, Greenville, Tex. Bids Sept. 25.

British Columbia—Campbell-Bennett Ltd Ltd., 718 West 5 Ave., Vancouver, B. C. CA., $568,990, John Hart hydro-electric power development extension on Campbell River. B. C. Power Comn., Victoria, B. C. Awarded Sept. 24.

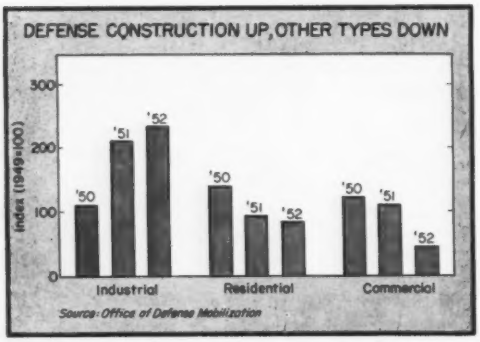
INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Ky., Fort Knox—U. S. Eng., 830 W. Broadway, Louisville, permanent hospital to replace temporary field hospital. $13,000,000.

Tenn., Nashville—Cain-Sloan Co., 209 5th Ave. N., department store expansion. $5,000,000.

Electrical Business Outlook



INDUSTRIAL CONSTRUCTION will continue to rise in 1952. To make this possible other building must be cut severely

New Goals for Mobilization

Charles E. Wilson's latest report to the President isn't just another stuffy document. It's a clear outline of where the economy is heading. And Wilson has definitely revised some of his earlier goals.

When the first Wilson report came out, back in March, it said the defense production job could be done by 1953. And by then, we might be rid of controls and shortages. At the time, Electrical World asked "Is Mr. Wilson Optimistic?" (EBO, April 16, 1951). We thought the job—and the inconveniences—might last well into 1953.

That is the prospect now, according to the new report. Deliveries of military equipment are now scheduled to hit a peak about October, 1952. By then, shortages of basic materials will begin to ease. But there won't be adequate supplies all around until 1953 is well along.

Lack of Construction Materials Slows Expansion

The reason is simple: We can't fit all the expansion of facilities to produce steel, aluminum, chemicals, and other materials into 1951 and 1952. There aren't enough construction materials. These programs—like the power industry program—are being stretched out to fit a more realistic construction schedule. In many cases, they will not be completed until 1953 or later.

So industrial construction is likely to stay high right through 1952 (chart). The only way this can be done is to hold down residential construction and enforce big cuts in commercial and other building. By implication, you can also count on a fairly high level of industrial building in 1953, and a rise in the overall construction level, as more materials are available to home and commercial builders.

As recently as June ODM was set to limit total construction in 1952 to 80% of the record level. Now the goal is closer to 90%—even if they succeed in keeping residential building in check. The increasing backlog of industrial construction is what makes the difference. It means overall building activity in 1952 will be off less than 10% from this year, despite whopping cuts in a few fields.

So we're stretching out the defense and industrial construction programs. What effect will this have on consumer durables production? Just this: Production cuts in the first half of 1952 won't be as bad as the worst fears. Priority programs won't gobble up all the materials. But the chances of raising output later in 1952 won't be as good.

'52 Appliance Output Should Top '49

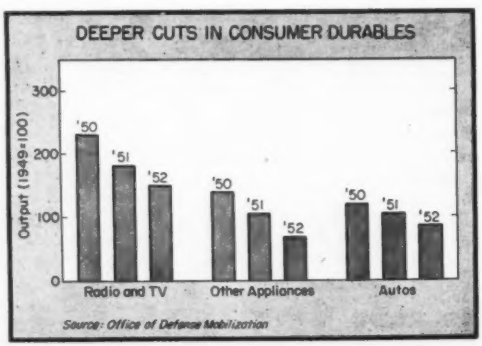
ODM has made a decision to maintain overall output of consumer durables at around 60% of the first-half 1950 level. In the case of electric appliances, this means production early next year will be lower. But plants won't have to close. And the full year should be better—for appliances, radio and TV together—than 1949.

At any rate, we are coming to the period when appliance output—and sales—will really be controlled by materials allocations, and not by lack of demand in the consumer market. The last two months have seen a pickup in appliance sales.

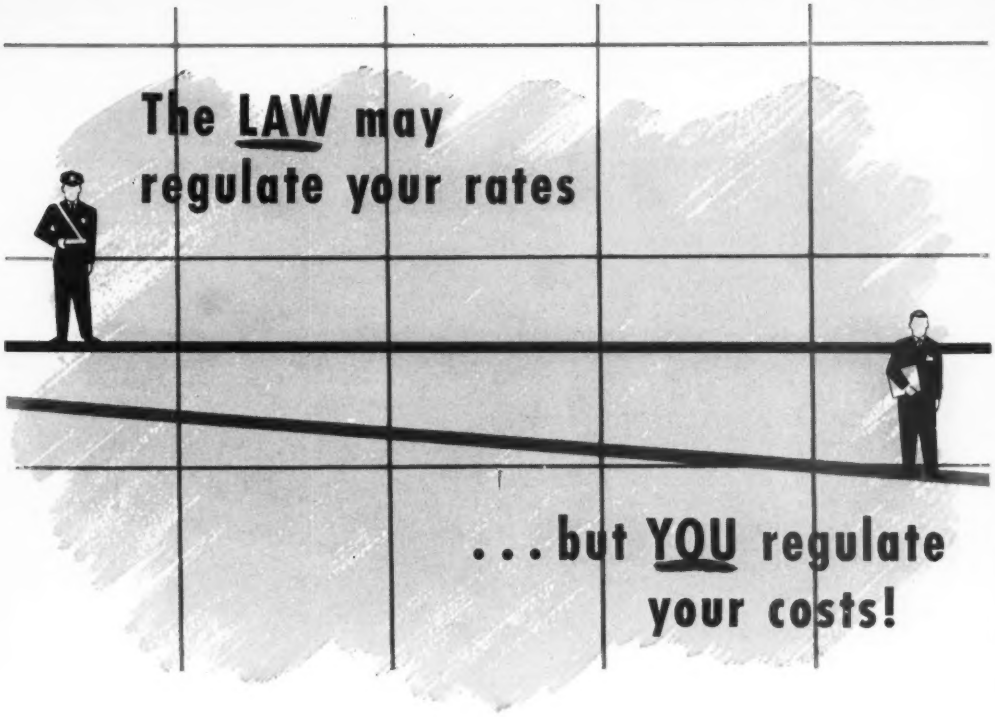
Banks announce that installment credit—much of it to buy appliances—rose more in August than in any month since September, 1950. And the upswing continued in September. Easier credit terms, recently authorized, did the trick.

Big promotions by stores have helped, too. Inventories are still high enough to supply appliances to everyone who wants them—and probably will be until the year end.

After that, the problem will be where to get goods, not where to sell them. And that may be true clear through 1952.



APPLIANCE OUTPUT will decrease next year. But it will not drop below the 1949 level for all appliances including TV



MANY utilities today are operating at rates established when maintenance and equipment costs were much lower. As a result, greater emphasis is now being placed on the efficiency of transmission equipment in order to keep operating costs down.

Moloney Transformers, from the largest power transformers down to the smallest distribution transformers, are today proving their claim of efficient, dependable, economical operation. We believe, and many utilities agree, that you can't buy better transformers. Investigate and find out for yourself what we mean by dependable, economical, long operating life. ME51-10

MOLONEY ELECTRIC COMPANY

Manufacturers of Power Transformers • Distribution Transformers • Load Ratio Control Transformers • Step Voltage Regulators • Unit Substations

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS, MO. AND TORONTO, ONT., CANADA

EXCITING CURRENT
Reduced 50%
WITH THE NEW Curvacore TRANSFORMER

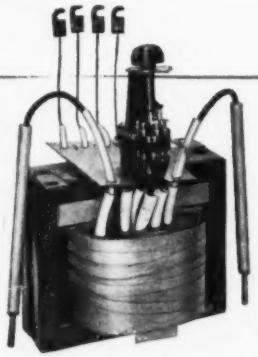
1. EFFICIENT CORE AND COIL ASSEMBLY

The *Curvacore* distribution transformer has high electrical efficiency and low operating cost. It's designed with a-wound core made up of cold rolled oriented steel with high flux carrying capacity and low hysteresis loss. Improved coil design offers a more balanced arrangement of core steel to copper. Increased cooling area within windings keeps copper-to-oil gradient low.

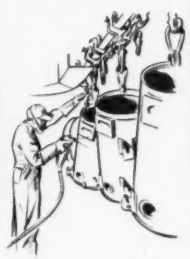
Now, you get these added benefits:

1. Exciting current reduced 50%
2. Better ratio of losses
3. Regulation improved 15%
4. Thermal capacity improved
5. Size and weight reduced 15%.

The *Curvacore* distribution transformer is a good investment because its performance will save you money on your system. You get top performance for every dollar you spend.



New internally operated tap changer has handle and position indicating dial plate above the level of the oil.



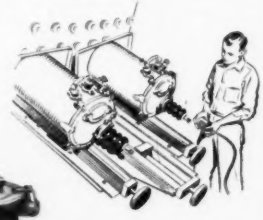
Special treatment makes surfaces resistant to industrial and humid atmospheres and salt spray.

2. EXACTING FINISH EXTENDS TANK LIFE

Formed from heavy gage steel, the *Curvacore* transformer tank is exceptionally strong and completely tight. Tank joints are machine welded to insure permanent protection against leaks and then pressure tested. Tanks are *Spra-Bonderized* and then painted with three coats of alkyd-resinous paint . . . each separately baked on. Previous to shipping, the completely assembled transformer is tested for oil tightness on a machine that tips it toward an inverted position.

Curvacore transformers are now being built in ratings 25 kva and lower. Soon higher ratings will be available.

For more information on *Curvacore* distribution transformers, see your local A-C representative. Or write Allis-Chalmers, Milwaukee 1, Wis. A-3413



Gasket seals are thoroughly tested on the tilt table.

Curvacore is an Allis-Chalmers trademark.

Curvacore TRANSFORMERS

ALLIS-CHALMERS A-C